TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

A Penton Publication

February, 1952

Volume 17—Number 2

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CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 16 and 80

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

NOISE ANALYZER
for continuous spectrum noises in range of 20 to 10,000 cycles

Developed for applications where reasonably continuous spectrum noises are found and great detail in analysis is not required, type 1550-A octave-band analyzer will be operated from output of standard sound-level meter. For levels above 70 db, it can be operated directly from microphone. Use can be for determinations of loudness, speech interference level, articulation index, airplane comfort level and other problems involving reduction of noise to produce comfort or ear protection. It can also be applied in determination of sound transmission loss of walls, partitions and floors and is useful as selective bridge detector or filter.

Eight bands are provided: lowest is low-pass filter; highest is high-pass filter; middle six, covering range from 75 to 4800 cycles, are each an octave in width. Octave-band levels over range of about 60 decibels can be measured. Made by **General Radio Co.**, Massachusetts Ave. & Front St., Cambridge 39, Mass.

▲ For more details circle **NED-900** on enclosed inquiry slip ▲

TORQUE CONVERTER
speed variable 0 to ¼ of input

Speed variable from 0 to ¼-input speed in either direction is feature of model 142XR torque converter. Transmission can be reversed at any time, with or without load on output shaft. Speed and reverse controls are separate levers operating on same plane. Reverse lever moves through neutral, and in this position output shaft is free and can be manually rotated in either direction. Unit is rated at ¼-hp at 350 rpm with 1725 rpm motor input speed. Load rating is 20 in-lb. Dimensions are 6 x 3½ x 5¼ in. and weight, 6 lb. Applications include turntables, feeders, conveyors and laboratory, medical and industrial equipment which require speed and direction changes. Made by **Revco Inc.**, Dept. NED, 2 E. Franklin Ave., Minneapolis 4, Minn.

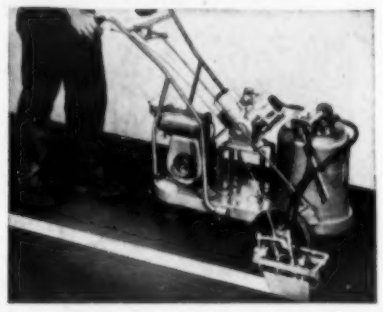
▲ For more details circle **NED-901** on enclosed inquiry slip ▲

HYDRAULIC CRANE SCALE
weighs in both pounds and kilograms

Fast accurate weighing of products for export and import is afforded by this Hydroscale hydraulic crane scale which has dial that indicates weight in both pound and kilogram units. Its use eliminates need for using conversion charts in receiving, processing and shipping. Scale which is offered in 5, 10 and 20-ton capacities hangs directly on crane or hoist hook and weighs loads as they are handled. Tare adjustment is provided for net load indication, and optional tilt-face dial permits high-level reading. Standard dials are offered in 24 and 30-in. diameters. Made by **Hydroway Scales, Inc.**, 20624 W. Eight Mile Rd., Detroit 19, Mich.

▲ For more details circle **NED-902** on enclosed inquiry slip ▲

FLOOR LINE MARKER
incorporates flexible paint guide



Sharp, clear lines can be painted on rough surfaces with the Econo-Liner line marker which incorporates a flexible paint guide that allows machine to follow contour of concrete, wood block, black top or brick surfaces. Marker can put down 10,000 ft of line per hour, and is particularly adaptable to marking danger zones, traffic lanes and cross walks. With adjustable spring-loaded shields it will paint any width from 2 to 6 in. and as close as ⅛ in. alongside fixed objects. Powered by 2-hp, 4-cycle engine, machine has diaphragm type, twin cylinder compressor which provides 4 cfm of air. Machine is easily converted in spray rig to handle spray painting, stencil and other spray jobs. Made by **Universal Mfg. & Sales Co.**, Santa Fe at Firestone, South Gate, Calif.

▲ For more details circle **NED-903** on enclosed inquiry slip ▲

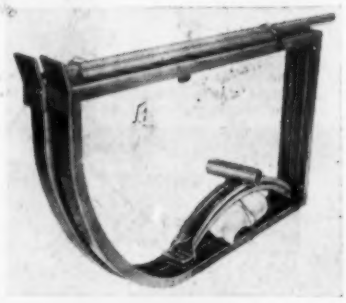
IMPULSE COUNTER
for up to 60 counts per second with accuracy of 100 per cent

One hundred per cent accuracy up to 60 counts per second is attained by step-motor impulse counter which measures 13 x 11 x 7 in., weighs 12 lb and operates on 115 v, 60 cycles. Unit covers counting ranges above those possible with electromechanical counters and below those in which scalers are normally required. Use can be in certain types of radiation counting where use of direct reading register is desirable. High degree of accuracy is maintained at speeds over 100 counts per second.

Counter consists of step motor with resetting type register and power supply enclosed in steel case. Motor and register assembly are mounted on power supply enclosure which contains electronic switch and high voltage supply capable of supplying power requirements of phototube preamplifier. Counting assembly can be removed and placed in remote position, such as control panel. Made by **General Electric Co.**, Special Products Div., Schenectady 5, N. Y.

▲ For more details circle **NED-904** on enclosed inquiry slip ▲

BARREL CRADLES
offered knocked-down for assembly



Designed for shipping and storage in knocked-down semiassembled form for space conservation, Pressed-Steel barrel cradles are offered in 18-in. and 24-in. heights with or without wheels. Crossbars, wheels and loading bar are easily assembled. Patented loading bar permits one man to handle fully loaded drums. Made by **American Pulley Co.**, 4245 Wissahickon Ave., Philadelphia 29, Pa.

▲ For more details circle **NED-905** on enclosed inquiry slip ▲

CASTING IMPREGNATING MACHINE
seals porous or leaking castings with colloid solution under vacuum

Production line vacuum impregnating of porous or leaking ferrous and nonferrous castings is function of model M-30 Mogullizer. Complete unit comprises vacuum pump, 20 x 30-in. sealing tank, rinsing and supply tanks, heating element, power supply and all fittings and controls.

Castings are first subjected to 29½-in. vacuum for 20 minutes to remove all air and moisture. Mogul cast seal colloidal impregnating solution is then introduced into tank followed by application of 100 psi air pressure for another 20 minutes. This forces solution into casting walls. When castings are removed and rinsed in water, they will seal out hot oil or kerosene under pressures as high as 10,000 psi. One of four models, unit has capacity of 4½ cu ft, weighs 850 lb and requires 36 x 100 in. floor space. Made by **Metallizing Co. of America**, 3521 W. Carroll Ave., Chicago 24, Ill.

▲ For more details circle **NED-906** on enclosed inquiry slip ▲

SPRAY STENCILS
for coding electronic chassis

Sprayed paint and these precision stencils can be used to speed code marking production of any complicated electronic device. Noncorrosive stencils are made to fit snugly over part to be marked, regardless of shape or size. Each code or symbol is precisely relieved from contour-formed stencil. Stencil holders make it possible to spray both sides of electronic chassis in single operation. Stencil is not stock item, being engineered to fit customer's chassis, transformer, rheostat, rectifier, capacitor, generator or other item. Available from **Jas. H. Matthews & Co.**, 3943 Forbes St., Pittsburgh 13, Pa.

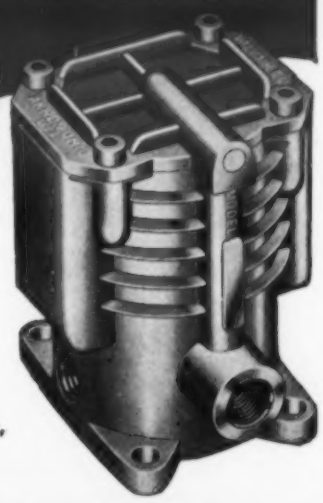
▲ For more details circle **NED-907** on enclosed inquiry slip ▲

BARREL & DRUM TRUCK
with concave handle shafts

Simple concavity of handle shafts is improved feature of Float-Away barrel and drum truck which now enables loading bilged (Naphtha) drums as easily as standard, straight-sided drums. Truck is available in three models all with 57-in. handle lengths, 23½-in. overall widths and capacity of 1000 lb. Wheels measure 10 x 2½ in. and can be had in metal or solid rubber, pneumatic or semipneumatic tires. Truck is all-welded construction and has forged steel toes. Double-end steel chime hook for all types of drums stays in given position by automatic tension. Totally enclosed spring cylinder assembly enables empty truck to stand alone and to turn in 24-in. space. Made by **Dico Co** S. W. Sixteenth St., Des Moines 5, Iowa.

▲ For more details circle **NED-908** on enclosed inquiry slip

The *New* VALVAIR SOLENOID PILOT VALVE



All This at a Low Price!

- OVER 20,000,000 CYCLES
- CORROSION-PROOF
- NO OVERHEATING
- MANIFOLD MOUNTING AVAILABLE

SIZE:
¼" pipe tap,
orifice ⅛"
or 3/16".

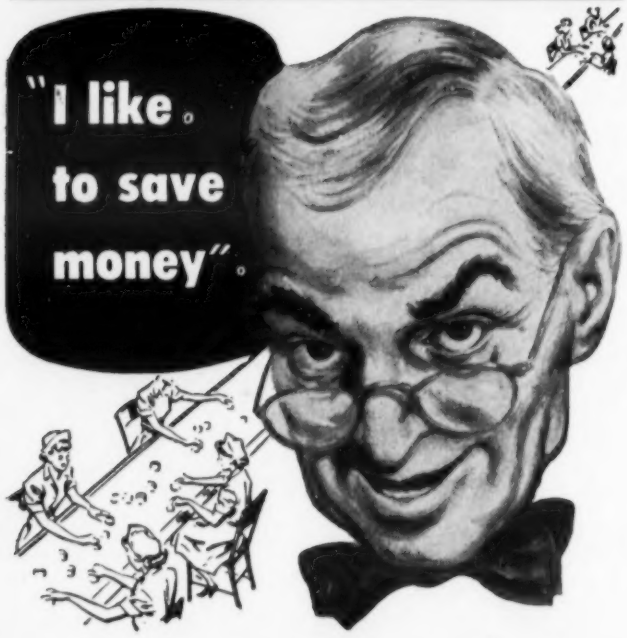
Write for our new Bulletin N-2.

The NEW Valvair Solenoid Pilot Valve is offered in 2-way and 3-way models, normally open or normally closed. Coils are completely sealed. Only two moving parts: spring and plunger. Valve life is almost unlimited.

VALVAIR CORPORATION • 947 Beardsley Ave., Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair 2-WAY 3-WAY 4-WAY

For more details circle NED-900 on enclosed inquiry slip



. . . that's why I buy

BUFFALO CONVEYOR BELTS

"Saving money on an item like a conveyor belt is a mighty tricky stunt and one that can backfire on ya' if you're not careful. I've been buying conveyor belts for over 22 years now and I guess I've tried 'em all. This Buffalo Belt *costs me less* because it *lasts me longer!*"

This is typical of comments we get from repeat customers all the time. The reason for this enthusiasm is that Buffalo Conveyor Belts are MADE TOUGHER with a stronger, sturdier cotton yarn that is WOVEN TIGHTER by our exclusive WOV-IN-WEAR process on a new kind of loom that permits us to weave under HIGHER TENSION. Stronger yarn and tighter weaving means a tougher belt that LASTS LONGER and, naturally, spells big operational savings for you. And . . . you don't pay a cent extra for Buffalo's premium quality. Over 200 sizes, 35 widths and 7 thicknesses available, as well as, seven specially treated belts for exacting applications.

Send for Free Folder

Illustrated pages of sizes, types and prices

FFALO WEAVING & BELTING COMPANY
ANDLER STREET BUFFALO 7, NEW YORK
PHILADELPHIA CHICAGO DETROIT SAN FRANCISCO

more details circle NED-910 on enclosed inquiry slip

New Equipment Is News!

If your company has developed a new or improved industrial product or material, industry wants to know about it. With this thought in mind, we have just published an 8-page booklet entitled "How to Get New Industrial Product Publicity." In it you will find practical guidance for the preparation of acceptable news releases and suggestions as to how they should be submitted to Business Magazine editors. To get your copy, just send me a note.

A. N. Gregg
EDITOR

NEW EQUIPMENT DIGEST
417 Penton Building
Cleveland 13, Ohio

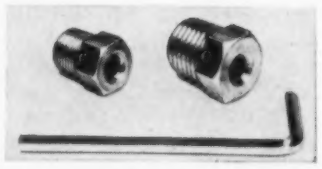
KNOCK-DOWN SHOP STOOL
three sizes adjust to 15 positions

These knock-down shop stools, adjustable in three sizes to 15 positions, have welded seat assembly, double-angle leg construction for strength and automatic nut-locking

feature. One size adjusts from 18 to 22-in. height, a second from 23 to 27 in. and the third from 28 to 32 in., all in one-inch steps. Finished in olive green, stool is quickly assembled with eight small bolts, four of which fasten legs to seat, while other four lock a square frame bracket to the four legs. Double angle construction keeps nuts tight on the bolts and stool rigid. A 14-in. diameter steel seat with Masonite top is available, and stool is equipped with pressed-in glides at ends of legs or in rubber tips. A back adjustable for height and angle can also be had. Made by **Standard Pressed Steel Co.**, P. O. Box 581, Jenkintown, Pa.

For more details circle NED-911 on enclosed inquiry slip

AIR BLEEDER VALVES
for air and hydraulic equipment



Servicing time spent on air and hydraulic equipment can be reduced through use of these air bleeder valves, made of brass with alloy socket screws and dry-seal threads. Ordinary key wrench is only tool needed to loosen socket head on these valves, designed with undercut internal thread so that socket screw can be "over-tightened" without leaking. Standard sizes are ⅛ and ¼-in. NPTF. Other sizes and special designs are available. Made by **Hydrovalve Co.**, Dept. N, 1319 Utica Ave., Brooklyn 3, N. Y.

For more details circle NED-912 on enclosed inquiry slip

Towsley
INDUSTRIAL FLOOR TRUCKS

for Every Materials Handling Purpose

No. 421. The "50 Line" for department, food stores, supply houses, hotels.

No. 480. "Selector Truck" may be equipped with variety of upper trays, shelves for special application.

No. 509. All steel "All-Welded" general purpose, push handle both ends, adjustable shelves.

No. 791. Side dump with automatic couplers fore and aft for pulling in train.

No. 384. The "200 Line" level top general purpose truck — "All-Welded" steel frame—pipe push handles.

There's an economy-wise, manpower-wise way . . . with Towsley Trucks! If you have a specific handling problem requiring special purpose equipment, let "Towsley give you a lift." For details write for Bulletin No. 50.

No. 786. Trailer type box truck with running gear mounted for perfect trailing.

TOWSLEY TRUCKS, INC., 1776 Elmore St., Cincinnati 23, O

For more details circle NED-913 on enclosed inquiry slip

FREE SCALE *Selector* FOR ENGINEERS

Now, for the first time, 12 standard scale graduations are illustrated ¾ size in a single spread for easy reference. You can select that scale, or series of scales, to serve your particular requirements — and be certain of getting exactly the type of scale desired.

Every DURALINE Scale is the last word in precision. It is ground from solid aluminum, engine divided at 70° F, and anodized. It is light in weight — easy to read, will not smudge paper and cannot file the pencil. Eighteen design and process improvements have been introduced. See why they make DURALINE the finest scale on the market today.

Ask your dealer for a copy of the Duraline Scale Selector — or write us direct. No obligation — except to help you make cleaner drawings — faster.

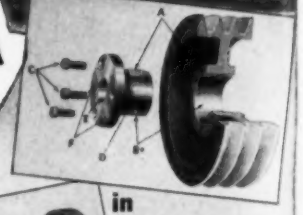
THE UNIVERSAL DRAFTING MACHINE CORP.
7960 LORAIN AVENUE • CLEVELAND 2, OHIO

UNIVERSAL DRAFTING MACHINE DURALINE SCALES

For more details circle NED-914 on enclosed inquiry slip

BROWNING *First Again!*

WITH "UNBREAKABLE" MALLEABLE IRON SPLIT TAPER BUSHINGS



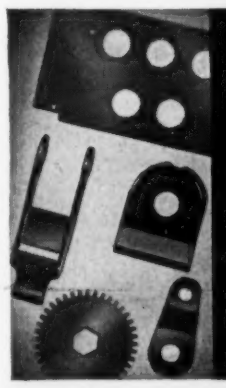
in BROWNING GRIPBELT SHEAVES

FLEXIBLE AND RIGID COUPLINGS and BROWNING PAPER PULLEYS

Write for the name of the BROWNING distributor near you

BROWNING MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY, U. S. A.

For more details circle NED-915 on enclosed inquiry slip



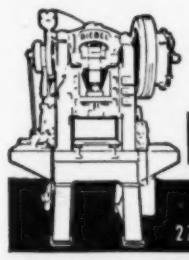
Why trust a costly die to an obsolete press?

If this is your problem—isn't it important to be assured of top-flight press and die performance behind every stamping job you plan?

INCREASED PROFITS!

Correct press and die engineering will increase your stamping output, reduce your down time, and give your die longer life. Let DIEBEL engineers with 30 years of specialized experience help you make every automatic press outlay more profitable.

For a guide to important savings, write on your letterhead for a new booklet, "Cost Savings thru Precision Stamping"



5-8-12 Ton Di-Masters
40 Ton Di-Matic

DIEBEL HI-PRODUCTION AUTOMATIC PRESSES

Di Machine Corp.
2701 W. IRVING PARK ROAD • CHICAGO 18, ILL.

For more details circle NED-916 on enclosed inquiry slip

CESCO RIGHT... before your Eyes!

Put CESCO shields right before the eyes of your workers! They're *right* for safety—sturdily constructed with correct designing for repelling harmful objects. *Right* for comfort—with adjustable headgears formed to the contour of the head. And there's the *right* shield for every job in the wide range of styles and materials from which to choose. **Send TODAY** *for CESCO literature and the name of your CESCO safety equipment distributor*

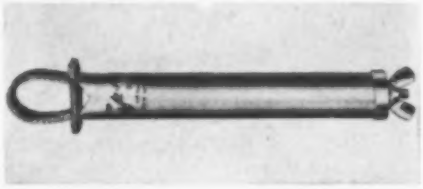
CHICAGO EYE SHIELD COMPANY • 2322 Warren Blvd. • Chicago 12, Ill.

CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City, D. F., Milwaukee, Montreal, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa

▲ For more details circle **NED-917** on enclosed inquiry slip ▲

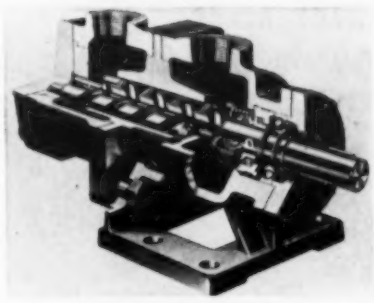
SAFETY CHISEL GRIP
adjustable model made in two sizes



Designed to hold chisels of various sizes, this safety chisel grip precludes possibility of bruising fingers or hands. Adjustable grip, made in two sizes, accommodates most chisels, punches, gouges, marking dies, star drills, test tubes and similar tools. Article being held is clamped firmly in shock absorbing band. Little or no driving impact is transferred to the hand. Only adjustment is large wing nut at end of hand grip. Made by **Rose Mfg. Co.,** 750 Club Bldg., Denver 2, Colo.

▲ For more details circle **NED-920** on enclosed inquiry slip ▲

HIGH PRESSURE PUMP
capacity ranges to 80 gpm at 275 psi



Designed for wide range of oil handling applications at pressures to 275 psi, De Laval-IMO A313B pump is of rotary positive displacement type. It has only three moving parts; is quiet, pulsation-free and compact; and operates at high speed. Capacity ranges up to 80 gpm, and intermittent pressures of 325 psi can be maintained. Pump handles light or viscous fluids in hydraulic systems, oil burners, lubrication and governing systems and similar services. Made by **De Laval Steam Turbine Co.,** 301 Nottingham Way, Trenton 2, N. J.

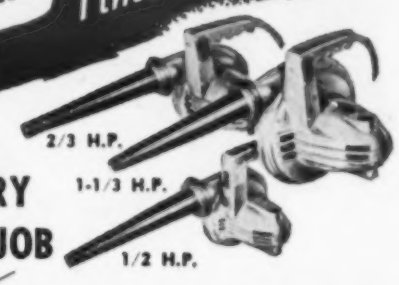
▲ For more details circle **NED-921** on enclosed inquiry slip ▲

FORK LIFT TRUCKS
made in gasoline and diesel models

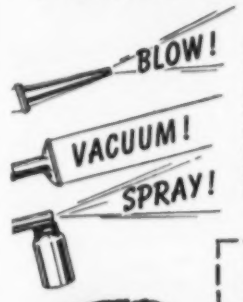
Buda-built gasoline or diesel engines are used to power FT series of fork lift trucks, available in 12 models on solid or cushion ties in capacities of 3000, 4000, 5000, 6000 and 7500 lb at 24-in. load center and 4000 lb at 18-in. load center. Over 85 per cent of replaceable parts are interchangeable between all 12 models. Features include all-roller mast with rolled mast channels, two speeds forward and reverse with single lever gearshift, quick change heavy duty clutch, carriage mounted on adjustable side thrust rollers to reduce wear and complete complement of electrical gages on full vision instrument panel. Five standard masts with 72, 84, 108, 114 or 120-in. lift are available. Made by **Buda Co.,** Dept. LF, 15440 Commercial Ave., Harvey, Ill.

▲ For more details circle **NED-922** on enclosed inquiry slip ▲

IDEAL "Hand Type" CLEANERS — *Cut Cleaning Time and Costs!*



3 MODELS ...for EVERY CLEANING JOB



For easier, faster maintenance or production cleaning jobs — on machinery, stock bins, scrap pick up — there's an IDEAL "Hand-Type" Cleaner to meet your needs exactly — to save you money! Three great models, all built to rugged, real industrial standards. Get today's top cleaner value — get IDEAL!

Sold Through Leading Distributors

TRY ONE FREE!

IDEAL INDUSTRIES, Inc. 1032 Park Avenue, Sycamore, Illinois

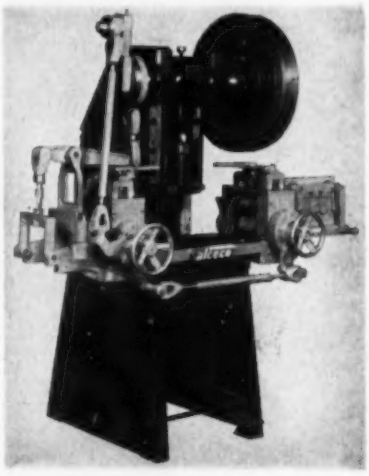
Please give us FREE DEMONSTRATION of the IDEAL "Hand-Type" Cleaner for our plant.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE____

▲ For more details circle **NED-924** on enclosed inquiry slip ▲

ALCECO AUTOMATIC ROLL FEEDING EQUIPMENT
(Made in Canada)

Single and double roll feeds are now available for prompt delivery. Stock straighteners and scrap cutters for all sizes of presses manufactured to standard specifications. Specials on short notice.



1. These Roll Feeds are built to feed within small tolerances not exceeding 0.010" on any side.
2. Hardened and Ground Rolls of the sleeve type are used.
3. All units are equipped with ball and roller bearings to assure a minimum of roll down time.
4. Clutches are of the over-running friction type using standard Timken Components.
5. Increases production over hand feeding up to 300%.

Complete Stock of Machines and Spare Parts Carried by

L. S. TARSHIS & SONS LIMITED
450 McGill St., Montreal, Que., Canada

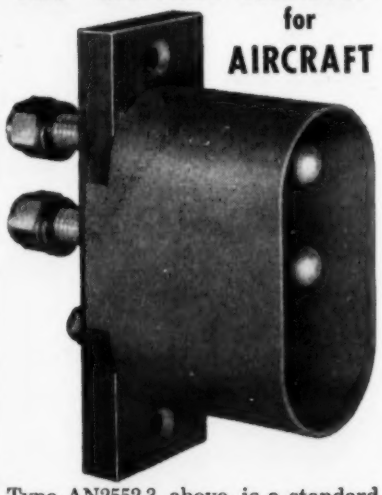
▲ For more details circle **NED-918** on enclosed inquiry slip ▲

CANNON PLUGS

Standard "AN" AN3106 Plug

New "AF" AF06A Plug

"AN" BATTERY FITTINGS for AIRCRAFT



Type AN2552-3, above, is a standard Receptacle for AN2551 Battery Plugs, provides current to start ship's engines and takes the load off batteries.

Cannon Electric Company, Factories in Los Angeles, Toronto, New Haven, Great Lakes Division, Benton Harbor, Mich. Representatives in principal cities. Address inquiries to Cannon Electric Co., Dept. B113, P.O. Box 75, Lincoln Heights Sta., Los Angeles 31, Calif.

SINCE 1915 CANNON ELECTRIC

▲ For more details circle **NED-919** on enclosed inquiry slip ▲

For Low Height Repair Work get a....

DUFF-NORTON "LO-HITE" JACK

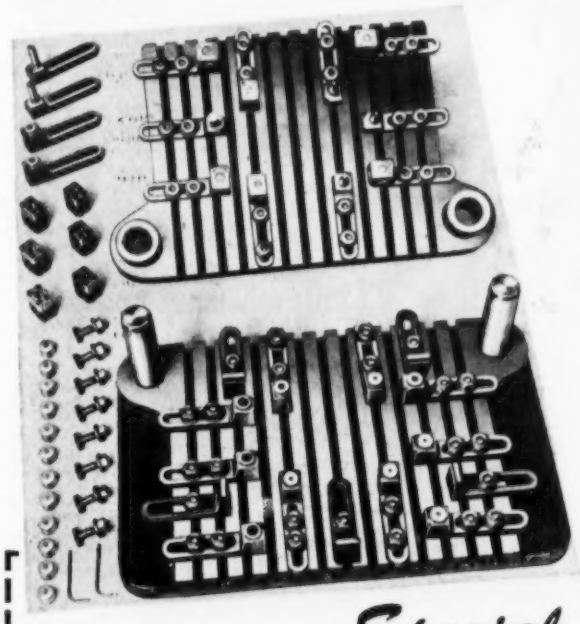
Easily spotted in places inaccessible to other style jacks—the "Lo-Hite" will raise a 30-ton load up to 2". Pump is independent, and can be operated in an open area while jack is spotted in confined space under load.

Write for Bulletin AD-3H today.

THE DUFF-NORTON MANUFACTURING CO.
Main Plant and General Offices: PITTSBURGH 30, PA.—Canadian Plant: TORONTO 6, ONT.
"The House that Jacks Built"

▲ For more details circle **NED-923** on enclosed inquiry slip ▲

Save TIME and MONEY with this New WHISTLER U-375 Adjustable Perforating Die Set

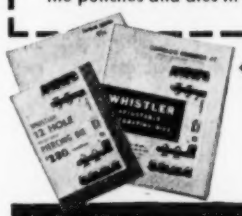


Special Introductory Offer

To prove the advantages of Whistler Adjustable Perforating Dies under your own production conditions we offer this U-375 set complete as illustrated...ready to set up and start work... at a special low price. Punches and dies are your own selection of sizes from 1/32" to 3/8". Complete set consists of 10" x 12" T slotted die set; 12 each punch, die and stripper assemblies plus locating pilots, gauges and set up plug. U-375 Unit shipped complete. . .

$280 Net F. O. B. Buffalo, N. Y.

Whistler Adjustable Perforating Dies are saving money in hundreds of metal working shops. Pierce materials up to and including 1/16" mild sheet steel. Minimum centers of 7/8". Up to 25 holes pierced in one operation with the U-375 set. Re-use the punches and dies in any number of different arrangements.



SENT FREE ON REQUEST
Special U-375 Booklet and General Catalogs. In brief informative style, with clear-cut illustrations, this literature gives complete details about Whistler Adjustable Dies. Write today.

S. B. WHISTLER & SONS, Inc.
750 Military Road Buffalo 17, New York

▲ For more details circle **NED-925** on enclosed inquiry slip ▲

OFFERS YOU OVER 15,000 TYPES, SIZES AND RATINGS OF ELECTRIC HEATERS FOR ALL YOUR NEEDS

FAST · EFFICIENT · ECONOMICAL · EASY TO INSTALL

This Booklet Shows You How To Save Money with Electric Heat

It's packed with ideas you'll find useful.

Get your copy now!

Regardless of your heating problems, there are Chromalox Electric Heaters that give you the heat you want when you want it. Compact Chromalox Units provide dependable, around the clock service; they are easily installed in existing or new equipment. Operating temperatures can be quickly regulated manually or thermostatically to fit the work requirements in your plant.

1B-19

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other advertisement on page 61

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle NED-943 on enclosed inquiry slip ▲

Twisted Wire Brushes IN 54 STANDARD SIZES

• Now, for the first time, you can order Mill-Rose precision made twisted wire brushes in 54 standard sizes... both single and double spiral for hand or power operation. Size range is from 3/16 inch to 1" diameter and 1½" to 3" brush length.

Mill-Rose also manufactures a wide line of special twisted wire brushes for many diversified uses in industry... all made to close specifications of carefully selected types of wire.

If you need twisted wire brushes for any purpose write today for the Mill-Rose Standard Brush Bulletin... If special brushes are needed, send specifications for a quotation.

THE MILL-ROSE COMPANY
1985 EAST 59TH STREET • CLEVELAND 3, OHIO

HIGH PRECISION MILL-ROSE INDUSTRIAL BRUSHES

▲ For more details circle NED-944 on enclosed inquiry slip ▲

MAINTAIN CONSTANT VOLTAGE

regardless of Line or Load changes

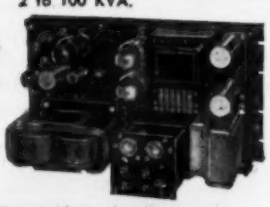
with STABILINE AUTOMATIC VOLTAGE REGULATORS

TYPE EM
(ELECTRO MECHANICAL)

Zero waveform distortion, high efficiency, no critical adjustments. Available in 115, 230, 460 volts, single and three phase models in ratings from 2 to 100 KVA.

TYPE IE
(INSTANTANEOUS ELECTRONIC)

No moving parts. Output voltage held to ± .1% for line variations; to ± .15% for load changes. Standard models available in 115, 230 volts, single phase, 50 and 60 cycles, in ratings from 250 VA to 5 KVA.



THE SUPERIOR ELECTRIC CO. SEC
BRISTOL, CONNECTICUT

902 THURE AVE., BRISTOL, CONN.

☐ Please send Bulletin 5351.

NAME.....

CO. NAME.....

CO. ADDRESS.....

CITY.....

ZONE..... STATE.....

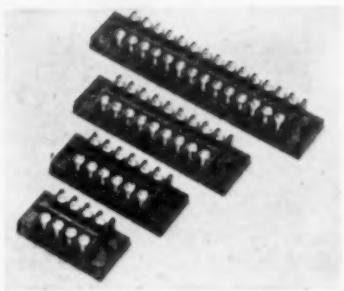
more details circle NED-945 on enclosed inquiry slip ▲

HAND SCREW DRIVER has insert bits for Phillips screws

Four different sizes of bits for driving Phillips recessed head screws are available for Hy-Pro Phillips adapter hand screw drivers and holders. No. 2 insert bit will drive from 75 to 80 per cent of all screws with Phillips recessed type heads. When one bit wears out, or when change in screw requires, bit can be easily removed and changed. Bits are alloy steel and are heat treated for strength and durability. Available from **Continental Screw Co.**, 485 Mt. Pleasant, New Bedford, Mass.

▲ For more details circle NED-946 on enclosed inquiry slip ▲

ELECTRIC TERMINAL BOARDS include through-feed design



Originally developed for U. S. Bureau of Ships, electric terminal boards are available for industrial applications. Molded of mineral-filled molding compound, illustrated terminals measure 2½, 3⅜, 4⅝ and 6½ in. long with 8, 12, 18 and 28 terminals. Feed-through sizes offered have 8, 10 and 12 terminals. Made by **Auburn Button Works, Inc.**, 250 McMaster St., Auburn, N. Y.

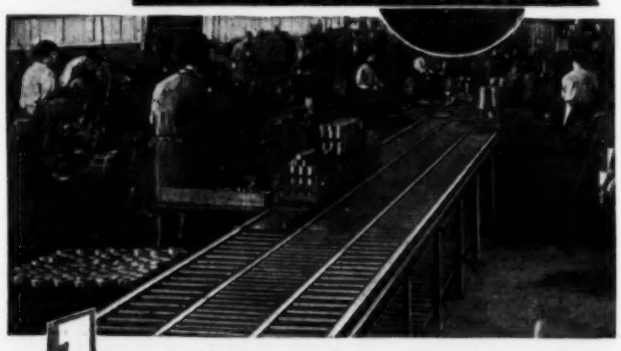
▲ For more details circle NED-947 on enclosed inquiry slip ▲

MAGNETIC STARTERS have visible contact overload relays

Both 0 and 1 sizes are included in these line-voltage type alternating current magnetic starters. All parts are accessible from front, and stationary and movable contact assemblies can be replaced without disassembling carrier. Ilsco solderless terminals are standard, but screw terminals are available. Overload relay features visible palladium-silver snap-action contacts. Enclosed heater element with expanding U-shaped bimetal and snap-action contact mechanism provides accurate motor overload protection. Trip-free manual reset is standard, but manual-automatic reset is available on special order. Made by **Essex Wire Corp.**, R-B-M Div., Hanna St., Logansport, Ind.

▲ For more details circle NED-948 on enclosed inquiry slip ▲

HOW AMERICA OUT-PRODUCES The WORLD



1 American industry—"Brings the work to the men instead of sending the men to the work".

The result — greatly increased output, and with less tiring effort. It's the American way.

Logan Conveyors have been an integral part of the nation's "mechanical handling picture" for two generations. From receiving department, through manufacture, assembly and shipping, Logan equipment puts flow into American production, clips hours and days off plant production schedules — brings the work to the men. Write for literature or for nearest engineer to call.

Logan Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

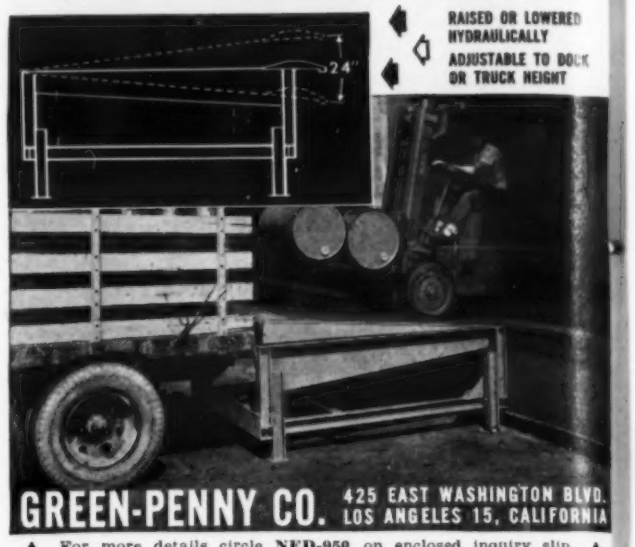
▲ For more details circle NED-949 on enclosed inquiry slip ▲

HYDRAULICALLY CONTROLLED adjustable Loading ramp

No installation is required for the Green-Penny Loading Ramp. Just set in place and plug into convenient 110v. outlet. No costly extras needed. It is adjustable to dock height and is hydraulically raised or lowered to truck bed. "It floats with the bed."

Easy to operate. Single-control lever, flush with the deck, raises or lowers ramp. Deck travel is 24". Capacity 20,000 lbs. Two sizes.

Simplify loading operations and make your shipping department more efficient. Write for Bulletin No. 100.



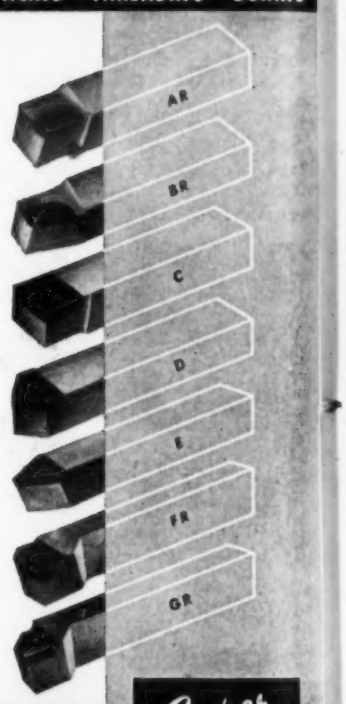
GREEN-PENNY CO. 425 EAST WASHINGTON BLVD. LOS ANGELES 15, CALIFORNIA

▲ For more details circle NED-950 on enclosed inquiry slip ▲

STC FOR TURNING • FACING • THREADING • BORING

Super STANDARD TOOLS NOW IN STOCK

Carbide Tipped WITH CARBOLOY-KENNAMETAL and available with other leading carbides



Get the benefit of Super's tool making skill and still use the carbide you like.

Send for Supplement No. 5 for net prices and full particulars.

QUALITY CARBIDE TOOLS SINCE 1927

Super TOOL COMPANY

21650 Hoover Rd., Detroit 13, Michigan • 5210 San Fernando Rd., Glendale 3, California

▲ For more details circle NED-951 on enclosed inquiry slip ▲

FOR PHENOMENAL SAVINGS IN PLANT LAYOUT

TEMPLATE BLUE PRINTS

FROM LAYOUT TO BLUEPRINT WITH NO DRAFTING

TemPrints are outline prints on transparent film, reproducing to exact scale the standard machines in your plant or made to engineering specifications of your particular equipment . . . TemPrints are also supplied for walls, partitions, windows, office furniture and shipping equipment.

TemPrint Grids are transparent sheets cross-lined to 1/8" or 1/4" scale suitable for layout and floor plans.

When TemPrints are cutout and applied to the grids, the result is an accurate layout of your plant or office. Any number of duplicate prints accurately reproduced in the same size may then be made by processing through an Ozalid machine.

SIMPLY MAKE THE LAYOUT — AND THE LAYOUT WILL MAKE YOUR PRINTS

TEMPRINTS PUT THE PLAN INTO YOUR PLANT

MARINE SCALE INDUSTRIAL MODELS

Marine has specialized in scale models for many years. Marine Miniatures are accurate reproductions to scale of well-known plant machinery and equipment. All models are dimensionally accurate — may be identified instantly. A special catalog is available on request.

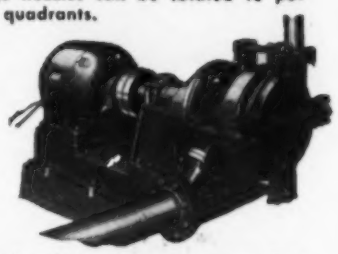
SEND FOR COMPLETE ILLUSTRATED CATALOG TODAY!

HARMAN ASSOCIATES
Dept. K-1, Halesite, L. I., N. Y.

▲ For more details circle NED-952 on enclosed inquiry slip ▲

Only the New TYPE "R" MORRIS SLURRY PUMP has these 4 features

1. Gland is under suction pressure only. This feature practically eliminates packing troubles.
2. For dismantling, you need remove only four bolts. No internal studs or bolts . . . no troublesome fits or joints.
3. You can remove impeller and liner without disturbing piping.
4. Shell interchangeable for right or left-hand rotation. Suction and discharge nozzles can be rotated to positions in any of four quadrants.



The New Type "R" Morris Slurry Pump handles caustic or acid mixtures containing abrasives or solids; also ore concentrates, tailings, slag, residue from filters and classifiers.

Write for specifications and operation data on pumps best suited to your particular needs. No charge or obligation.

MORRIS MACHINE WORKS
Baldwinsville, N. Y.
Sales Offices in Principal Cities

MORRIS CENTRIFUGAL PUMPS

For more details circle **NED-953** on enclosed inquiry slip

Better rubber products are made with Du Pont NEOPRENE

Courtesy: Remington Arms Company, Inc., Bridgeport, Conn.

Neoprene insert in new stud driver muffles noise . . . resists abrasion, heat and oil

Actuated by a powder cartridge, this stud driver will fasten steel or wood to concrete or steel surfaces. For example, it can be used to hang sash or attach electrical fixtures to brick walls—at speeds up to 100 times faster than conventional methods. And this safe, simple-to-operate new tool is built to last—with one of its vital parts made of Du Pont neoprene.

Even when driving studs through steel, the neoprene insert under its safety shield muffles noise. Here resilient neoprene withstands punishment caused by abrasion from rough, unfinished surfaces. Lubricating oils or grease won't soften or disintegrate it. And neoprene resists even the blistering heat of sun-baked metal.

Advanced design makes this ingenious tool a tremendous time- and cost-saver. And Du Pont neoprene is essential to its success, just as it is to thousands of resilient parts and products used in industry today. While Du Pont makes no finished products of neoprene, your rubber-goods manufacturer or distributor will be happy to tell you about the neoprene products he supplies.

FREE! THE NEOPRENE NOTEBOOK

Full of interesting stories. New, unusual applications of neoprene to build new products . . . improve old products . . . reduce maintenance costs. Write today for your free subscription. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Division O-2, Wilmington 98, Delaware.

NEOPRENE
The rubber made by Du Pont since 1932
DU PONT
REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

For more details circle **NED-954** on enclosed inquiry slip

WORK BENCHES with maple or pressed wood tops

Utilizing heavy rolled steel frame construction and legs tension-bolted to frame for permanent rigidity, line of work benches is offered with hard rock maple or pressed wood tops. Maple is cross-grain laminated top and bottom, with framed core glued under pressure. Pressed wood tops have framed center core built with cross bars and blocks. Both tops are warp-proof, lacquered and waxed, oil and grease resistant and are 1⅝ in. thick. Adjustable feet permit raising or lowering bench level on uneven floors. Benches are available with or without steel drawers and in two sizes: 23 x 46½-in. top; 23 x 60-in. top. Both are 33½ in. high. Made by **Sturdi-Bilt Steel Products, Inc.,** Dept. SB-3, 624 S. Michigan Ave., Chicago 5, Ill.

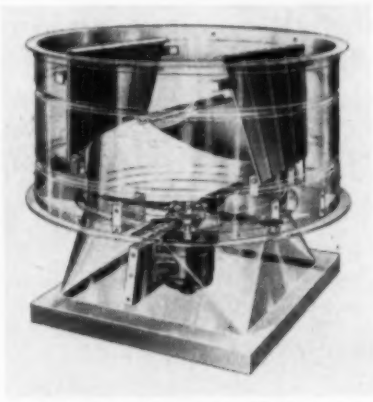
For more details circle **NED-955** on enclosed inquiry slip

REPRODUCTION PAPER produces fine detail duplicates

Especially suitable for reproducing originals with very fine detail, drawings and documents in poor conditions and printed half-tone originals, Kodagraph Fine-Line contact paper will also make high quality negatives from which cloth prints or offset plates can be produced. Paper has glossy surface and rich look and feel. It has same wide latitude, practical speed and unformity of other Kodagraph contact papers. Suitable for use with all types of contact photocopying equipment, paper will be available in wide range of standard sheet and roll sizes in thin weight. Made by **Eastman Kodak Co.,** Dept. E, 343 State St., Rochester 4, N. Y.

For more details circle **NED-956** on enclosed inquiry slip

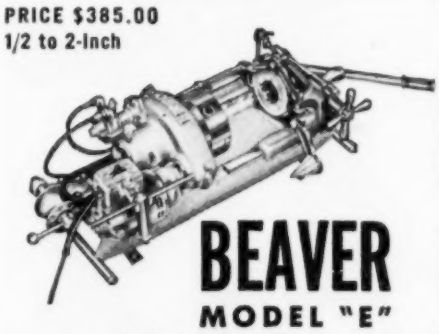
POWER VENTILATOR seven sizes in high capacity line

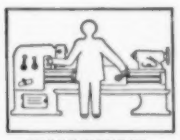


Rapid localized removal of air contaminated with smoke, fumes, dust and heat is possible with free exhaust fan ventilator offered in seven sizes with motors from ⅓ to 5 hp. Capacities range from 5000 to 75,550 cfm. Standard construction is galvanized steel, but protected metal, aluminum stainless steel, Monel and other metals can be used. Unit is powered by axial flow fan connected directly to motor. Air shaft extends above fan and terminates in pair of dampers that open and close automatically as fan is turned on and off. Made by **Burt Mfg. Co.,** Dept. NE, 927 S. High St., Akron 11, O.

For more details circle **NED-957** on enclosed inquiry slip

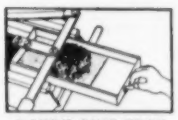
PRICE $385.00
1/2 to 2-Inch



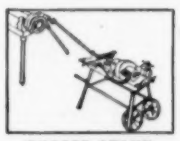


RIGHT-HANDED

GEARS RUN IN OIL



HANDY CHIP TRAY



RUGGED STAND AVAILABLE

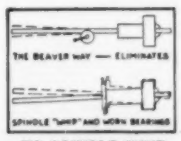
BEAVER MODEL "E"
pipe and bolt machine

● Cuts, threads and reams all kinds of pipe from ⅛ to 2-inch. With a drive shaft and geared tools cuts and threads pipe up to 8-inch. Cuts off bolts and rods up to ⅞-inch. Threads bolts and rods to 1½-inch in one cut; up to 2-inch in two cuts.

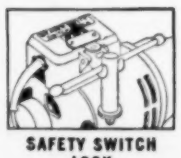
Write Beaver for detailed bulletin—or order through your supply house!

"Over 50 Years of Friendly Service"

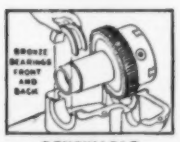
BEAVER PIPE TOOLS
266-300 Dana Ave.
Warren, Ohio, U.S.A.



NO SPINDLE WHIP



SAFETY SWITCH LOCK



RENEWABLE BRONZE BEARINGS

For more details circle **NED-958** on enclosed inquiry slip

IMMEDIATE DELIVERY!

40 Stock Sizes.
Tuck end tough kraft.
Stocked for immediate shipments.
Sizes range from 1/2 x 1-7/16 inches square to 2 x 7-1/4 inches.
Special cartons, plain or printed, made to your specifications.

Tags in all grades and colors to your order, printed, numbered, or plain.

Campbell BOX AND TAG CO.
Main & Equipment St.
South Bend 23, Indiana

For more details circle **NED-959** on enclosed inquiry slip

The instrument man's "Man Friday"

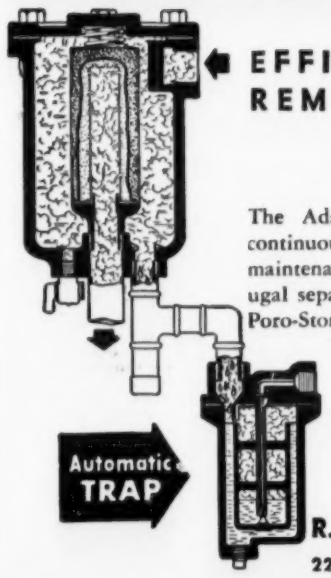
You'll never run out of uses for this high-fidelity Foxboro Portable Potentiometer. Use it to check overall accuracy of your temperature instruments and thermocouples; as a substitute temperature instrument during emergencies; for exploring temperatures not requiring continuous measurement.

Accurate to ¼ of 1% of scale. Extra-long (17") scale for close, accurate reading and *vernier dial* for precise balancing. Weighs only 12½ lbs. Rugged metal case-and-cover. Write for details. **The Foxboro Company, 1342 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO REG. U. S. PAT. OFF. PORTABLE POTENTIOMETERS

For more details circle **NED-960** on enclosed inquiry slip

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

For more details circle **NED-961** on enclosed inquiry slip

As sure as the coming of Spring

...you will switch to MOLYBDENUM High Speed Steel

The increased usage of Molybdenum high speed steel is based on:

its merits,
its easy availability,
its lower cost.

You can save tungsten for uses where it is really needed. Don't delay, the switch is easy.

All the facts you need in this FREE BOOKLET.

Climax Molybdenum Company
500 Fifth Avenue · New York City

HS11

For more details circle NED-962 on enclosed inquiry slip

LIKE AN ATOM-IC EXPLOSION

Just 1/32" (pinhole size) faucet leak

MUSHROOMS into ATOMIC WASTE

of approximately 95,000 gallons of water yearly—costing:

$24.14

@ $1.90 per M cubic feet

If a hot water faucet, then actual FUEL WASTED heating 95,000 gallons costs approximately:

$88.01 if coal (9879 lbs.)
$91.08 if oil (792 gals.)
$84.41 if gas (84,411 cu. ft.)

Above figures authenticated by Hackensack Water Co. and American Gas Association.

STOP this needless WASTE during today's MATERIAL and MANPOWER shortages with 'SEXAUER' "Easy-Tites" that outwear ordinary faucet washers 6-to-1, thus SAVING labor on 5 REPEAT repairs, PLUS water and fuel, while prolonging the life of SCARCE fixtures.

PAT'D.

"EASY-TITE" Faucet washers

...a modern laboratory triumph, are compounded from du PONT NEOPRENE (tested up to 300°F.) instead of rubber—to withstand DESTRUCTIVE HEAT common in present-day superheating water systems—that formerly broke down washer's structure.

Built like a tire with fabric re-inforcement

they resist the grinding, closing squeeze that SPLIT and MUSH ordinary washers out of shape...causing LEAKS.

Through combining NEOPRENE and FABRIC RE-INFORCEMENT they OUTWEAR ordinary washers 6-to-1 on hot or cold FAUCETS—thus you slash water, fuel and labor costs.

THE NEW 'SEXAUER' CATALOG, Edition G, just out pictures over 2500 TRIPLE-WEAR plumbing REPAIR parts and Pat'd. Precision Tools. It's today's accepted buying guide for discriminating purchasing and maintenance personnel among thousands of top PLANTS, INSTITUTIONS and GOVERNMENT AGENCIES that rely on SEXAUER repair materials. *Send for your copy today!*

Then too, there's a SEXAUER TECHNICIAN within quick call from coast-to-coast, who offers a special SURVEY service that sets up a schedule of the exact replacement parts required for your particular plumbing fixture regardless of make or age and *without obligation.*

A postcard will bring him and your NEW Catalog promptly.

J. A. SEXAUER MFG. CO., INC., Dept. AU 22,
2503-05 Third Avenue, New York 51.

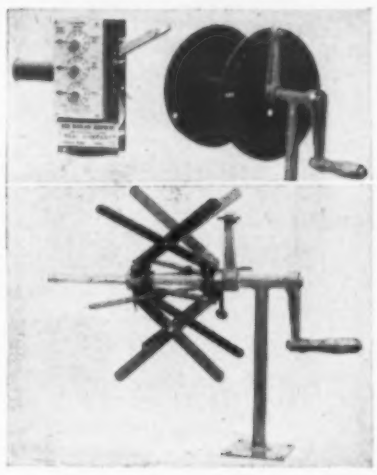
as advertised in **THE SATURDAY EVENING POST**

SEXAUER

WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-963 on enclosed inquiry slip

COILING-MEASURING MACHINE handles up to ¾-in. diameters

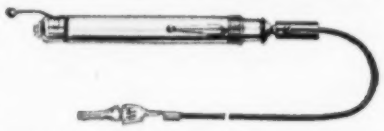


Combining collapsible coiling reel, accurate measuring meter and free-running payout reel, low-cost T V unit facilitates making coils of wire of any desired length. Coiling reel collapses to allow easy removal of wire coils which can range in diameter from 5 to 9 in. If desired, reel can be replaced with empty spool. Measuring meter accommodates up to ¾-in. diameter material. Payout reel has 24-in. diameter and can be removed from spindle so that wire spool can be mounted for dispensing wire. All units are equipped with metal bases for mounting directly on bench. Made by **Neal Co.**, Dept. 18, 318 N. Eighteenth St., Omaha, Nebr.

For more details circle NED-964 on enclosed inquiry slip

CONTINUITY TESTER for identifying wires and circuits

Pocket-size continuity tester is designed to determine continuity of circuits and identify wires between terminals or in multiwire cable found in switchboards and control panels. Circuits can be tested without live wire connections, power being provided by penlite batteries in tester. Signal light indicator illuminates point of contact. Used with one hand, tester has 4-ft cord and alligator clip. When not in use, test lead is detached to prevent exhausting batteries. Made by **Ideal Industries, Inc.**, 1032 Park Ave., Sycamore, Ill.



For more details circle NED-965 on enclosed inquiry slip

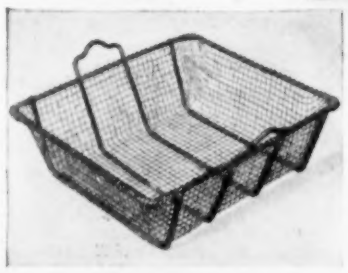
LOUNGE TYPE FURNITURE for office and reception room use

Single seat lounge chair, two-seat settee and three-seat settee comprise line of upholstered aluminum furniture developed for reception room and office applications. Scratch-finished tubular aluminum frames are Emecoated or anodized to preserve finish. Deep innerspring cushions are interchangeable, and plastic simulated-leather upholstery is flameproof and stain resistant. It can be cleaned with a damp cloth. Wide range of colors and textures is offered in this series which has hard rubber glides and arm rests. Made by **Emeco Corp.**, Hanover 2, Pa.

For more details circle NED-966 on enclosed inquiry slip

METAL BASKETS for Special Jobs

At right—A very special basket of stainless steel designed and built by Hoffman to lick a tough heat-treating problem.



At left—A special, combination tote and degreasing basket designed and built by Hoffman.

Shops with the toughest metal basket problems come to Hoffman.

In addition to designing and building special baskets we also make a full line of standard baskets for parts degreasing, cleaning and handling, and for Kreider Dryers. Write for bulletin.

HOFFMAN COMPANY
41-43 N. PENN ST., YORK, PA.

For more details circle NED-967 on enclosed inquiry slip

NYLINED*

BEARINGS With SMOOTH, TOUGH DuPONT NYLON

SOLVE MANY BEARING PROBLEMS

NYLINED Bearings have a thin liner of DuPont NYLON within an inexpensive metal sleeve. This enables low-cost quantity production and fabrication of trial quantities to customer specifications without a major die investment.

*A BETTER BEARING AT A MODERATE COST

- Longer life
- Lower friction coefficient
- Superior without lubrication
- Resist chemical attack
- Outstanding abrasion resistance
- Dampen mechanical vibration
- Suitable for close fits
- Non-contaminating
- Smooth, silent operation

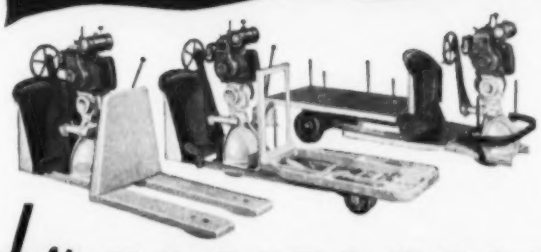
Write for literature and the name of your local representative.

THOMSON INDUSTRIES, INC. Dept. 6
MANHASSET, NEW YORK

Also Manufacturers of BALL BUSHINGS...the Ball Bearing for Linear Motions

For more details circle NED-968 on enclosed inquiry slip

truck-man



***for* HORIZONTAL Material Movement**

Four models for LOW COST handling. Wisconsin powered, 360° turning, simple controls. Many get 8 hrs. per gallon. Pneumatic drive wheels, easy on floors, elevators, operators. Under 1000 lbs., rate up to 3500 lbs.
Model DF hydraulic Pallet Lift, ideal inter-plant and "feeder" to stackers. Rates 3000 lbs., 40" to 48" pallets. Maneuverable in narrow aisles.
Model D hydraulic Skid Lift. Safety controls start and stop 3500 lb. loads without jarring. Pneumatic drive wheels, 9" rubber load wheels cushion ride.
Model DT Platform Utility for manual loading. Carries mobile workshops, pipe, lumber, firefighting and maintenance equipment. Speedy, four pneumatic tires.
NEW TRUC-TOR pulls 13,000 lbs., weighs 990. Ideal for limited-load floors, docks, elevators. Anyone can operate. Specials built for unusual conditions. Write for 1952 catalog and name of your dealer.

truck-man Div. of The Knickerbocker Co.
627 LIBERTY ST., JACKSON, MICH.

For more details circle NED-969 on enclosed inquiry slip

FREE!

New Guide to Military Packaging "Specs"

EASY TO READ EASY TO USE

The New MEHL Packaging Guide . . . a condensed outline on "protective barrier" . . . Moisture—Grease—Vapor-Proof Packaging . . . simplifies military specifications.
Whether your requirements are large or small . . . for domestic or export purposes . . . MEHL packaging experts and resources are at your service.
Send for your Free Guide or any service requirements.

MEHL MANUFACTURING CO.
2055 READING ROAD CINCINNATI 12, OHIO
A Division of Sydney-Thomas Corp.

For more details circle NED-970 on enclosed inquiry slip

NEW MAGNA BIT HOLDER

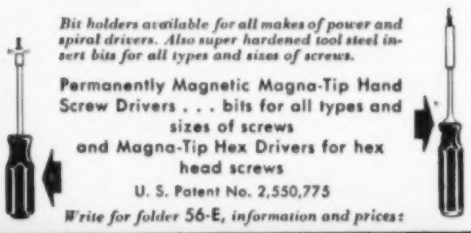
A REVOLUTIONARY, LABOR SAVING TOOL. CUTS SCREW DRIVING COSTS 3 NEW WAYS

Hand starting or *pre-positioning screws* in assembly operations is *no longer necessary;* a high energy *permanent* magnet in bit chuck holds the bit and energizes it with 10 times the "pull" to hold the screw *firmly* on bit. Labor costs are cut.

Reduces bit costs through the use of super hard, low-cost interchangeable insert bits.

Reduces bit wear and replacement since the energized bit seats itself positively in the screw slot or recess.

Bit holders available for all makes of power and spiral drivers. Also super hardened tool steel insert bits for all types and sizes of screws.



Permanently Magnetic Magna-Tip Hand Screw Drivers . . . bits for all types and sizes of screws and Magna-Tip Hex Drivers for hex head screws

U. S. Patent No. 2,550,775

Write for folder 56-E, *information and prices:*

MAGNA DRIVER CORP.
779 Washington St. Buffalo 3, N. Y.

For more details circle NED-971 on enclosed inquiry slip

Grounds upkeep and maintenance problems are solved quickly, easily and BETTER when you use the powerful 5-HP Gravely Tractor! . . . 20 tools for year-round use with seasonally selected attachments, quick change from job to job in minutes! Only the Gravely does so many jobs so well!

All-Gear Drive, Power Reverse. Institutions-tested for 31 years . . . Ask for your copy of FREE Gravely catalog, "Power vs. Drudgery." Find out how you can do MORE jobs faster and better. Write today!

Gravely Motor Plow & Cultivator Co.
BOX 280 DUNBAR, WEST VIRGINIA

For more details circle NED-972 on enclosed inquiry slip

Get the facts on TUFF-TEX*

This modern, economical greaseproof floor tile is manufactured especially for industrial plant use. It's the answer to *many* factory floor problems because it *stands up* beautifully to nearly every kind of wear and tear a factory floor must face!

A really *heavy-duty* floor tile . . . Tuff-Tex withstands material handling truck traffic with ease.

And it is especially recommended for machining areas where grease and oil abuse is heavy.

Send today for your free copy of "TUFF-TEX Greaseproof Industrial Flooring" . . . a folder that shows all the Tuff-Tex colors . . . gives full information and specifications.

THE TILE-TEX DIVISION, *The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois.*

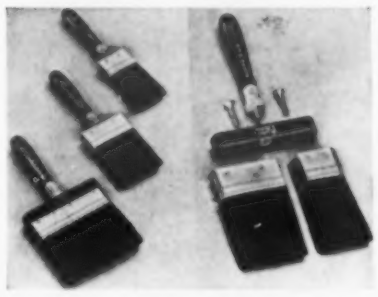
The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada.

*Registered Trademark, The Flintkote Company

TUFF-TEX ... *Greaseproof Industrial Tile*

For more details circle NED-973 on enclosed inquiry slip

MULTI-SIZE PAINT BRUSH converts for various applications



Convertible into three different sizes, 3-4-1 paint brush is adaptable for most finishing operations. It consists of handle section and 1½-in. and 2½-in. bristle sections which fasten to handle with screws. By varying assembly combinations, brush becomes 4-in. wall brush, 2½-in. varnish brush or 1½-in. sash brush. Pure 2½-in. bristles are held by triple-lock construction. Three brushes at left are 1½ and 2½-in. components of larger 4-in. brush, each shown with its own handle. Photo at right shows disassembled brush and connecting pieces. Made by **Baker Brush Co.,** 83 Grand St., New York 13, N. Y.

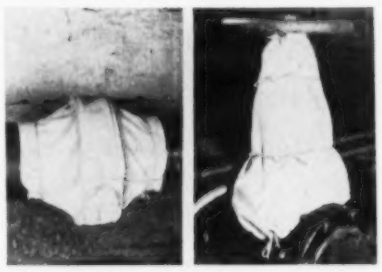
For more details circle NED-974 on enclosed inquiry slip

TUBULAR PALLET RACKS designed for storage of dies

Design of standard tubular pallet racks for die storage has steel deck placed on units of pallet rack bed with flanges turned down on each side. Units are capable of carrying extremely heavy dies, exact weight depending on size of opening. Shelf illustrated can hold over 6000 lb. Rack is easily assembled and disassembled and can be tiered to any height. There is no bolting or welding in joining beds and uprights. Wide variety of deck material for shelf surface is available, including sheet steel, plywood and board. Distributed by **American Sales Engineers,** Dept. 63, 141 W. Eight Mile Rd., Detroit 3, Mich.

For more details circle NED-975 on enclosed inquiry slip

VALVE & FLANGE COVERS resistant to acids and caustics



Workers in the vicinity of pressurized lines are protected from sprays or leaks resulting from gasket or packing failures by these valve and flange covers called ChemKovers. Made of Dynel, a staple fabric highly resistant to acids and caustics, covers will not support combustion and are easily cleaned. They require no special tools to install and can be removed quickly when lines require repair. Covers are designed to fit all styles and sizes of valves and flanges. Made by **Mine Safety Appliances Co.,** 220 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle NED-976 on enclosed inquiry slip

CYCLONE SEPARATORS

Our standard line of separators and years of specialized engineering will prove valuable in PNEUMATIC CONVEYING MATERIALS HANDLING DUST CONTROL and many other applications

WRITE FOR DATA SHEET

1712 N. 2ND ST. PHILA. 22, PA.

QUINN BROTHERS INC.

For more details circle NED-977 on enclosed inquiry slip

The FIRST Roller Coaster

Originally known as the Switchback, the first Roller Coaster was built in Paris in 1816. The crude originals were soon discontinued because of numerous fatalities. However, in 1880 they were again introduced in Paris and the United States simultaneously—and have since been enjoyed by millions.

JERVIS B. WEBB CO. was the FIRST to develop Horizontal Roller Curve Assemblies

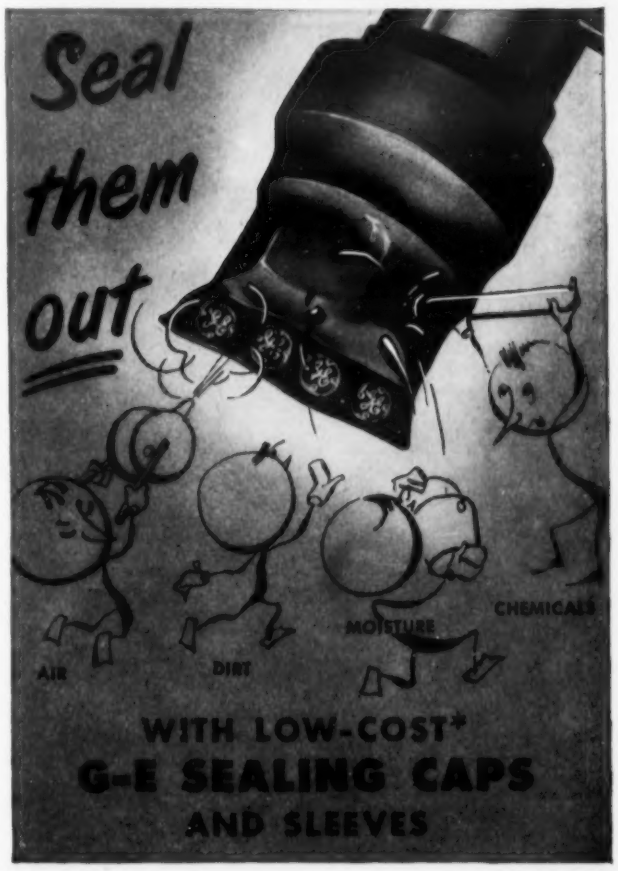
Typical Webb Horizontal Roller Curve Assembly—The Webb Roller Curve is the most economical, serviceable and satisfactory unit for carrying an overhead conveyor chain around a horizontal curve. Chain and trolleys are held in the correct vertical position by ball bearing rollers which reduce both friction and wear to a minimum. Roller Curves are made in various radii and arcs for varying needs. Rollers are mounted between two segment bars.

The Working Part Of A Roller Curve Is The Roller—Rollers used in Webb Roller Curves are specially designed and built for the service. Available for two types of lubrication . . . oil hole in cover and grease fitting in drilled center pin. In either case, the Roller Curve is assembled so as to make lubrication easy. The design of the Roller Curve is such that the rollers are readily replaceable without dismantling.

CONVEYOR ENGINEERS AND MANUFACTURERS
JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
FACTORIES IN DETROIT . . . LOS ANGELES . . . HAMILTON, ONT.

For more details circle NED-978 on enclosed inquiry slip

FABRICATED PARTS FOR INDUSTRY'S TOUGHEST JOBS



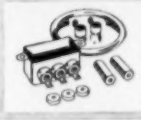
Here's the quick, easy, economical way to protect tubing, valves and wires from contamination and mishandling—use General Electric sealing caps and sleeves. These low-cost plastics seals safeguard small parts from dirt, air, moisture, chemicals and paint during fabricating, shipping and storage . . . say "Hands off!" to careless fingers.

G-E sealing caps and sleeves are easy to apply. Simply expand them in the dilating solution and slip them on; they quickly shrink to a tight fit. Tough and durable, yet easy to remove, they have excellent electrical properties, resist heat, moisture and chemicals, and are readily adaptable to assembly-line procedures. Widely used in the refrigerator industry to protect small tubing, they also serve as insulation for electrical parts and as protection for valves.

**Far less than 1¢ each in most sizes.*

G.E.'s *complete* molding service offers you 60 years' experience

G-E mycalex offers a unique combination of properties, including high dielectric strength, dimensional stability and heat resistance up to 700 F.



G-E silicone rubber parts are ideal for electrical applications. They offer low moisture absorption, excellent heat resistance and good dielectric strength.

For more information, write to General Electric Company, Section L-2, Chemical Division, Pittsfield, Massachusetts.

GENERAL ELECTRIC

For more details circle NED-979 on enclosed inquiry slip

BE FRESH . . . STAY FRESH

wear a **DUPOR Automatic Water-cooled Respirator**

For years a prime favorite of respirator users. Sponge filter saturated in water provides moist air—cool, comfortable breathing. Keeps out dust, fumes, smoke, paint spray. Face mask is of soft white rubber. Maximum visibility. Automatic valve exhausts breathed air instantly. Wear while paint spraying, or as protection against gases, dusts, smoke, fumes.

Sample sent $2.00 pp

H. S. COVER
South Bend, Ind.

▲ For more details circle NED-980 on enclosed inquiry slip ▲

Protect YOUR *Profits*

Equipment and merchandise need the lasting protection that always comes in a Ruberoid Bonded Roof. Costly losses might be avoided by giving your roofing a thorough check-up now. A leader in the built-up roofing field for almost 60 years, Ruberoid can supply you with materials and specifications to meet any roofing conditions.

Ruberoid makes every type of built-up roof—Smooth Surfaced Asbestos, Coal Tar Pitch with gravel or slag surfacing, and smooth or gravel-and-slag surfaced Asphalt — in specifications to meet your every need. Ruberoid Approved Roofers are not prejudiced in favor of any one type. You are assured of uniform quality, centralized responsibility, and more economical operation with Ruberoid Built-Up Roofings. Write for Ruberoid's free Built-Up Roofing Specification Book and Roof Selector. The Ruberoid Co., 500 Fifth Ave., New York 18, N.Y.

The RUBEROID Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS

▲ For more details circle NED-981 on enclosed inquiry slip ▲

Job-Proven **PLASTIC ROCK FLOORS**

A NEW FLOOR IN 48 HOURS!

Save priceless production time! Renew old floors over the week-end to last for many years. Heavy traffic only packs denser. Non-skid, noiseless, spark-proof; bonds and feather-edges perfectly on concrete, wood or steel. Each Plastic Rock unit is complete; nothing else to buy; no guesswork; maintenance crew or contractor can apply.

Get free Bulletin N-2.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

▲ For more details circle NED-982 on enclosed inquiry slip ▲

DUPLEX TANK BUSHING connects suction and return lines

Development of this No. 750 duplex tank bushing can speed up installations by allowing both suction and return lines to be connected in same tank opening. Bushing has pipe thread tapping on undersize of suction opening also to take threaded pipe directly into tank. Construction is of cast iron with standard compression (slip through) brass fittings. Sizes include ⅜ x ⅜ x 2 in., ½ x ½ x 2 in. and ⅜ x ½ x 2 in. Tubing sizes are outside-diameter. Other sizes are available upon requiset. Made by **Universal Valve Co.,** 255 Third Ave., Elizabeth 2, N. J.

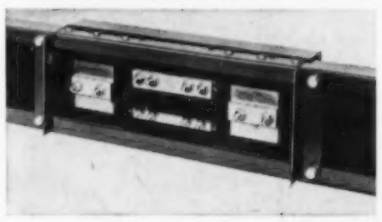
▲ For more details circle NED-983 on enclosed inquiry slip ▲

BAND SAW WHEEL TIRE easily replaced in the field

Down time chargeable to band saw wheel tire changes on model J-120 band saw is reduced through incorporation of long life Carter Products Co. Jiffy tire, designed for easy replacement in field. Sawing through metal strip enclosed within tire removes tire from wheel. New tire can be tapped into place at once, wheel requiring only simple lubricant for ease in fitting. Wheel is ready for immediate installation and use, without gluing, grinding or rebalancing. Band saw is made by **Yates-American Machine Co.,** 731 Third St., Beloit, Wis.

▲ For more details circle NED-984 on enclosed inquiry slip ▲

FEED-IN DUCT joint design simplifies installation

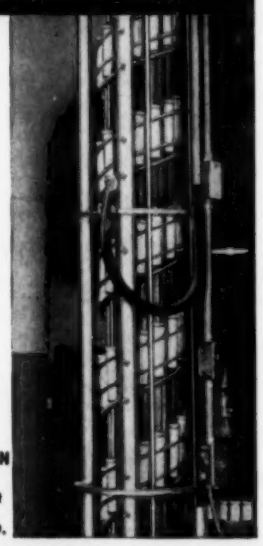


Available in capacities of 600 to 4000 amperes, this feed-in duct has ends which are identical in construction so that installation time and effort are held to minimum. Factory-installed joint bolts face outward for accessibility. Only tie plates and nuts are required to complete the joint. These can be affixed with one hand, and the installer can support himself with other hand for added safety. Other features include low voltage drop, totally enclosed construction, and high mechanical and dielectric strength. Made by **Square D Co.,** 6060 Rivard St., Detroit 11, Mich.

▲ For more details circle NED-985 on enclosed inquiry slip ▲

No headaches here!

Buschman Solves Alka-Seltzer handling problem . . . .



Missing link in a new Alka-Seltzer production line was floor-to-floor movement of 200 glass bottles per minute. The Buschman engineered lowering machine eliminated manual handling, minimized breakage, saved space and easily handled the 50% increased production of the line.

Ingenious solution of handling problems is a Buschman specialty based on long experience moving practically any part or product faster, easier and at lower cost. Write for detailed literature.

PRODUCE MORE . . . FOR LESS
Buschman Conveyors

THE E. W. BUSCHMAN CO., INC.
Spring Grove at Winton Place
Cincinnati 32, O.

▲ For more details circle NED-986 on enclosed inquiry slip ▲

Recommended

FOR LONG DEPENDABLE SERVICE

SEALMASTER BALL BEARING UNITS

- Pillow Blocks
- Take-Up Units
- Flange Units
- Cartridge Units
- Flange Cartridge Units

• **PERMANENTLY SEALED** SealMasters' patented centrifugal seal permanently seals out dirt—seals in lubricant—increases bearing life and reduces maintenance problems.

WRITE FOR CATALOG No. 845

Bearing Division
STEPHENS-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · Car Pullers · Winches · SealMaster Ball Bearings · Variable Speed Reducers · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

▲ For more details circle NED-987 on enclosed inquiry slip ▲

Now.. YOU CAN PRETREAT ALL METAL SURFACES AGAINST CORROSION WITH **VINSYNITE**

No costly treating equipment necessary . . . Can be used on any size piece, large or small

One simple application of Vinsynite phosphatizes the metal and leaves a very thin film of organic protective coating which inhibits corrosion; and adheres tight to any metal surface to form a firm foundation for succeeding coatings.

When you use Vinsynite, the size of the piece being treated is not limited by the conventional treating equipment, because Vinsynite is applied like paint—by brush, spray, dip or roller.

Vinsynite must be used in conjunction with a primer-finish system or in some instances with a finish coat only to give resistance to corrosion. We have formulated a series of primers and finishes—vinyl, phenolic, chlorinated rubber and epoxy—which give the highest degree of protection when used with Vinsynite.

We'd like to give you the full facts on Vinsynite's applications and resistance to corrosion. Write us and we will send you the information immediately.

SPECIALTY COATINGS, INC.
DIVISION OF THOMPSON & COMPANY
1085 Monroe Avenue, Oakmont, Pa.

▲ For more details circle NED-988 on enclosed inquiry slip ▲

APPROVED

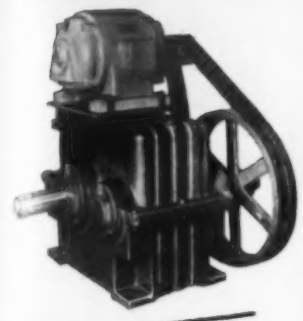
for CRITICAL APPLICATIONS

Shown above: AMP's exclusive PRE-INSULATED DIAMOND GRIP* terminal. COMPLETELY INSULATED! Install with one quick stroke of a tool with rates available up to 3300 terminations per hour. Unique CORROSION PROOFING process provides an excellent electrical contact between the metal of the terminal and metal of the conductor, and greatly retards the detrimental effects of salt sprays, noxious gases, and most commercial acid fumes. Only AMP can offer such double protection.

AMP AIRCRAFT-MARINE PRODUCTS INC.
2100 Paxton St., Harrisburg 21, Pa.

▲ For more details circle NED-989 on enclosed inquiry slip ▲

SACO SPEED REDUCERS



SIMPLIFY DRIVE PROBLEMS

Adapt standard motors to the best speed for every job. Any reduction ratio between 10 to 1 and 60 to 1 is possible with a Saco Reducer by an easy change of sheaves on the V-belt drive.

Almost any full speed motor can be mounted on top or end of reducer. Pivoted motor base permits easy adjustment of belt tension, saves floor space and simplifies installation. Steel helical gears and ball bearings give long life and top efficiency.

The wide range of output speeds possible with a Saco Speed Reducer will allow the use of standard, full speed motors on a wide variety of jobs.
Two reductions attained (1) through V belts, (2) through steel helical gears.

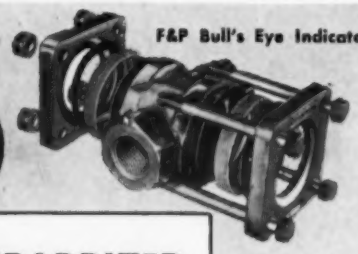
Write for Catalog 643

STEPHEN S-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · Car Pullers · Winches · SealMaster Ball Bearings · Variable Speed Reducers · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILL.

▲ For more details circle **NED-990** on enclosed inquiry slip ▲



NOW

STANDARDIZED AND STOCKED FOR PROMPT DELIVERY

Selection of FLOWRATOR Meters and other F&P flow-rate instruments simplified

Standardization of F&P indicating instruments permits quantity manufacture, lower costs, and quicker deliveries.

You can now select flow meters from catalog data to meet your immediate requirements. Engineering charges and manufacturing delays are eliminated.

WRITE FOR NEW "STOCK FLOW METER" BULLETIN

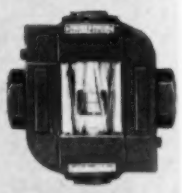
Contains complete data, sizes, and prices with illustrations of F&P instruments now stocked. It lists all F&P sales engineering offices showing which offices carry stock meters.

PROCESS CONTROL INSTRUMENTS

FLOWRATOR

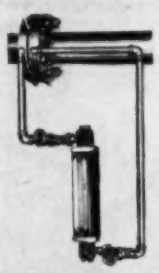
FISCHER & PORTER CO.
DEPT. 2M-1D
HATBORO, PENNSYLVANIA, U. S. A.

RATOSIGHT Flow Indicators



"C-CLAMP" FLOWRATOR Meters

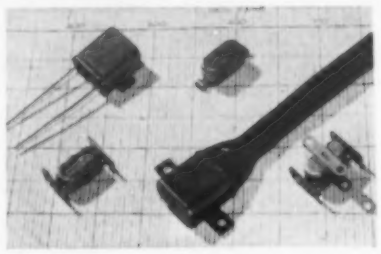
ORI-FLOWRATOR high-capacity by-pass meters



MAGNASIGHT Flow Indicators

▲ For more details circle **NED-991** on enclosed inquiry slip ▲

BIMETAL STRIP THERMOSTAT offered in ranges up to 600° F



Responding only to temperature changes in controlled device or surrounding air, type C bimetal strip thermostat is available with operating ranges up to maximum of 600° F. Temperatures as low as −60° F do not impair operation. Use is in conjunction with disk type thermostats for apparatus, communications and avionic equipment. Variety of terminal arrangements, and semisealed (standard) and hermetically sealed styles are manufactured. Later type can be supplied as alarm thermostats, with double unit set to open at both minimum and maximum temperature. Made by **Stevens Mfg. Co.**, Dept. B, 69 S. Walnut St., Mansfield, O.

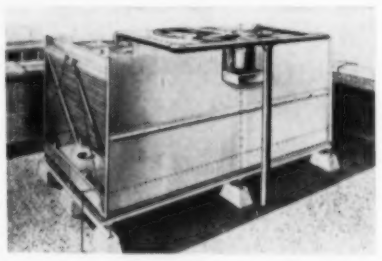
▲ For more details circle **NED-992** on enclosed inquiry slip ▲

LONG HANDLED TEST LEADS for use with most test instruments

Eight-inch long polished hard rubber handles on No. 329 test leads speed up and simplify circuit probing in complicated radio and instrument chassis. Handles have short, sharp-pointed tips which minimize possibility of short-circuiting adjacent connections. Kinkless flexible leads are 48 in. long, have standard phone tips and can be used with practically all types of test instruments. Made by **Insuline Corp. of America**, Dept. NE, 3602 35th Ave., Long Island City 1, N. Y.

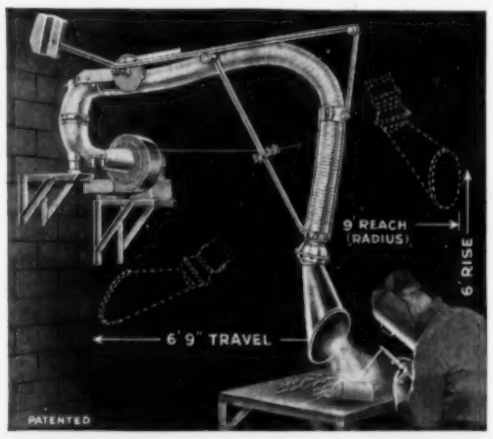
▲ For more details circle **NED-993** on enclosed inquiry slip ▲

WATER COOLING TOWER made in seven standard sizes



Adaptable for use in power, petroleum, gas, chemical processing and metal-working industries and wherever air conditioning and refrigeration are used, Double-Flow Aquatower supplies intermediate amounts of cold water. Cooling towers are low in height, a 150-ton unit standing only 7½ ft high. Pumping head and required fan horsepower are low for any given capacity and design performance. Double-Flow principle has one fan utilizing air from two completely open sides. All parts of tower are readily accessible for maintenance and inspection. Aquatower is made in seven standard sizes ranging from 50-ton unit with all steel or wood with asbestos cement board casing. Made by **Marley Co.**, 224 W. Gregory Blvd., Kansas City 5, Mo.

▲ For more details circle **NED-994** on enclosed inquiry slip ▲



RUEMELIN Fume Collector

Removes Welding Fumes at the Source...

Why continue to let your employees inhale welding fumes? You can solve the problem quickly and efficiently by installing a Ruemelin Fume Collector. It produces a powerful suction that draws out noxious gases, smoke and heat at the source. Guards employee health, resulting in less welder fatigue, therefore, greater plant output. Clears shop air with minimum loss of building heat. Covers maximum welding area vertically, horizontally and by circle swing. Shipped assembled, easy to install. 9 ft. and 15 ft. sizes (radius of swing). Write for Bulletin 37-D.

These Fume Collectors are particularly helpful in winter months when doors and windows are closed.

RUEMELIN MFG. CO.
3883 N. PALMER STREET MILWAUKEE 12, WIS., U. S. A.
MANUFACTURERS AND ENGINEERS — SAND BLAST AND DUST COLLECTING EQUIPMENT — WELDING FUME COLLECTORS

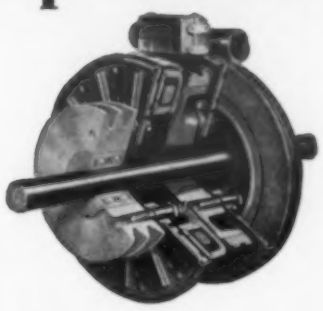
A 5258-¼R5

▲ For more details circle **NED-995** on enclosed inquiry slip ▲

Send for complete data!

WARNER

electric BRAKES *and* CLUTCHES



• Machine designers . . . get faster, better regulated, more automatic *stops* and *starts* from your machinery—at less cost—by using Warner electric brakes, clutches and clutch-brakes. Operated by electro-magnetic engagement of an armature and magnet, these new units offer the simplest, most modern and most direct system of stopping and starting machinery. They give you *less* trouble and *less* maintenance—*more torque for their size and weight*. Send for complete information and design data—Catalog NED.

WARNER

WARNER ELECTRIC BRAKE & CLUTCH CO.
BELOIT, WISCONSIN, U. S. A.

▲ For more details circle **NED-996** on enclosed inquiry slip ▲

CM PULLER

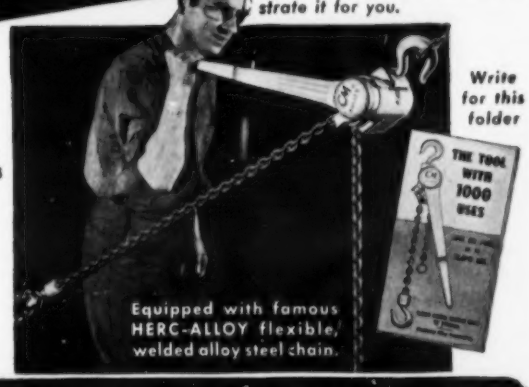
...the handiest tool in the plant

Just think of the jobs you can do with this sturdy, low-cost puller

LIFTS OR PULLS at any angle up to 12,000 POUNDS

¾ ton model weighs only 13 lbs. One of the handiest tools ever devised. Does thousands of lifting and pulling jobs. Eliminates unsafe, makeshift methods. Gets work done fast. Costs very little. Pays for itself in countless ways. *Ask your distributor to demonstrate it for you.*

4 sizes ¾, 1½, 3 and 6 ton



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CHISHOLM-MOORE HOIST CORPORATION
(Affiliated with Columbus McKinnon Chain Corporation)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
Sales Offices: New York, Chicago, Cleveland • Distributors Everywhere

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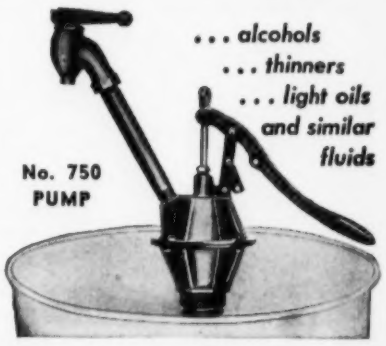
NEW! FOR VOLATILE LIQUIDS

Long Life provided by nylon diaphragm

Leak Proof with positive shut off in fell spout



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No. 750 PUMP

Fast pumping with less effort. Short strokes, large volume—up to 15 gallons per minute.

Trouble-free simplicity. No cylinders, pistons, rings or leathers. Valves are iminated bakelite, valve springs are bronze. Dirt or wear cannot cause suction loss. Unaffected by moisture or condensation.

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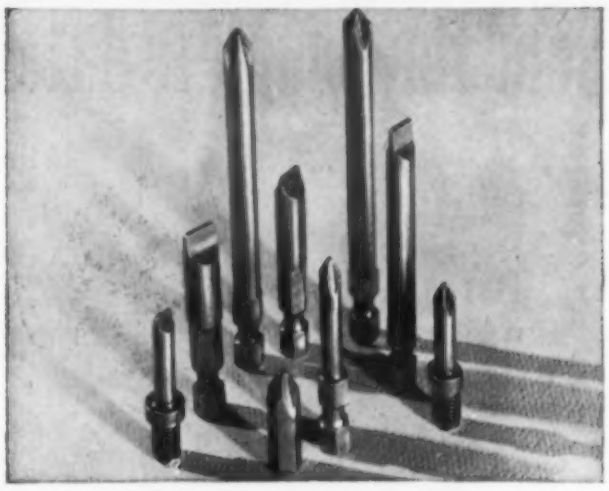

You save replacement time with HOMMEL power screwdriver bits

Specially selected alloy steel and proper heat treating have given Hommel bits the hardness and toughness required for maximum service without replacement. A complete line for air and electric power screwdrivers is available . . . consisting of ¼ hex drive and threaded shank bits for slotted, Phillips, Frearson or Reed and Prince screws. Write now for catalog to Dept. NED.

Since 1906 HOMMEL

Ludwig Hommel & Co., 72 First Ave., Pittsburgh 22, Pa.

For more details circle NED-999 on enclosed inquiry slip

MEETING MILITARY SPECS IS AN OLD STORY FOR T-W USERS

Specifications Mil-W-6860 and 6858 (formerly AN-W-30 and 32) and Taylor-Winfield resistance welding equipment have been partners for years.

From Taylor-Winfield you can have the efficient Tri-Phase DC or Single Phase Spot and Seam AC welders in many sizes and styles. From Taylor-Winfield you can obtain all the engineering data or field assistance you need to meet your problem, and the welders to do the job.

Let T-W know your requirements. Write, wire or phone.

RESISTANCE WELD

AIRCRAFT FRAMES
JET ENGINE PARTS
•
PROJECTILES
WEAPONS
CONTAINERS
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ALUMINUM ALLOYS
STAINLESS STEELS
NICKEL ALLOYS
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THE TAYLOR-WINFIELD CORPORATION · WARREN, OHIO

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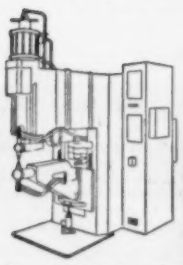


Resistance Welders Since 1883

TAYLOR-WINFIELD
RESISTANCE WELDERS

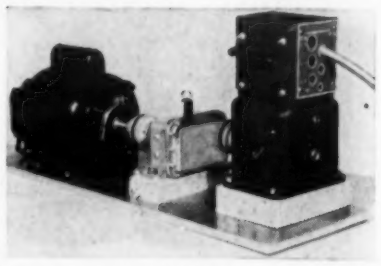
For more details circle NED-1000 on enclosed inquiry slip

GAMMOMETER measures gamma radiation

Utilizing Ohmart cell which converts radioactive energy directly into electrical energy, model AH-1 gammometer precludes use of high voltage power supply. Simple yet precise cell is designed so that samples are placed in a well within the cell. Quantities of activity measured are larger than when slides must be prepared. Line of gammometers has ranges from 0.1 to 10,000 microcuries full scale, calibrated in terms of radium, iodine-131 or cobalt-60. For measurement of ambient field intensity, units are available calibrated from 0.1 to 10,000 milliroentgen per hour full scale. Made by **Ohmart Corp.**, 2349 Ferguson Rd., Cincinnati 38, O.

For more details circle NED-1001 on enclosed inquiry slip

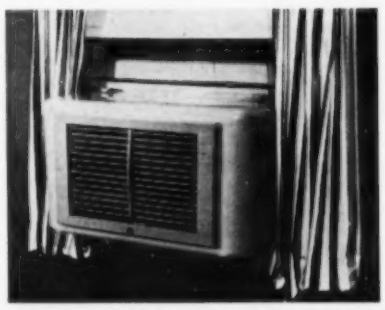
CHEMICAL FEEDING PUMP suitable for plating bath additions



Any desired constant rate of flow from 12 oz to 27 gal per hr can be obtained with this Sigmamotor addition agent pump. This proportioning pump is self-priming and operates on four individual supply lines. Rubber, Neoprene or Tygon tubing can be used, depending upon chemical being pumped. If necessary, agents can be diluted to secure desired feed rate. Offered by **R. O. Hull & Co.**, 1305 Parsons Ct., Rocky River 16, O.

For more details circle NED-1002 on enclosed inquiry slip

ROOM AIR CONDITIONERS for floor areas up to 485 sq ft.



To assure quiet operation, compressors of all three models in line of room air conditioners are hermetically sealed and spring mounted. Adjustable grills permit control of air flow for draft-free operation. Model 33 is designed for maximum floor area up to 230 sq ft, while models 50 and 75 are for areas of 325 and 485 sq ft, respectively. Model 33 has ⅓-hp motor, capacity of 4200 Btu per hour and air discharge velocity of 470 ft per hour. One-half horsepower model 50 has capacity of 6100 Btu per hour and discharge velocity of 560 fpm. Unit with largest capacity of 8100 Btu per hour has ¾-hp motor and air discharge velocity rate adjustable from 510 to 700 fpm. Announced by **Radio Corp. of America**, RCA Victor Div., Camden, N. J.

For more details circle NED-1003 on enclosed inquiry slip

REEL ROLLER

Handles Any Material on Reels

QUICKLY, EASILY, SAFELY!

A. D. Reel Roller saves time and money, makes handling any reel-wound material a simple, one-man job. Compact size saves space; for portable or permanent installation. Adjusts for reels of various diameters. Use two for extra wide reels. Only 33¾" x 26½" x 4" high. Capacity 3000 lbs.

Any user or seller of wire, cable, copper or steel strand rope needs this simple, safe, time and money-saving device. Immediate delivery, order now.

Only $45.50

AUTOMATIC DEVICES

1260 Hodiamont Ave. St. Louis 12, Missouri

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WHAT ARE YOUR MAGNETIC SEPARATOR PROBLEMS?

Remington Rand, Inc., Tabulating Machine Division, Ilion, New York, are one of many manufacturers using Homer Magnetic Separators to cut sorting and handling costs in the processing of ferrous metal parts.

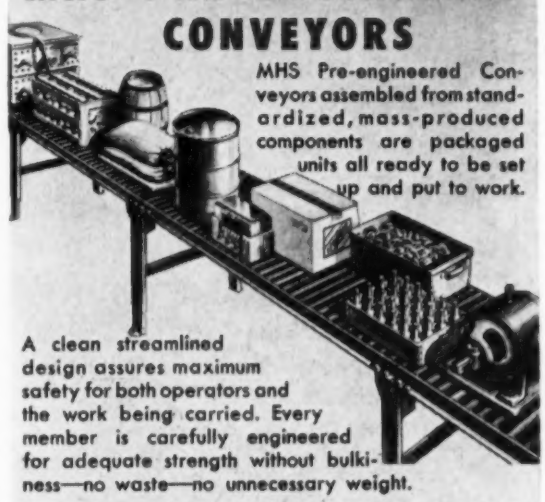
In the operation above, ferrous tabulating machine parts are quickly sorted from abrasive tumbling stones, saving many valuable man hours, and permitting the handling of larger quantities of finished parts. If you have a similar problem—consult us at once—Homer Engineers will be glad to recommend the type of magnetic equipment you need. Bulletins upon request.

Homer The HOMER MANUFACTURING CO., Inc.
Dept. I-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

For more details circle NED-1005 on enclosed inquiry slip

+ Plus Values OF MHS PRE-ENGINEERED CONVEYORS



MHS Pre-engineered Conveyors assembled from standardized, mass-produced components are packaged units all ready to be set up and put to work.

A clean streamlined design assures maximum safety for both operators and the work being carried. Every member is carefully engineered for adequate strength without bulkiness—no waste—no unnecessary weight.

Write for Bulletin PE-1 or for a quotation based on your specific requirements.

Mechanical Handling Systems, Inc.
4605 NANCY AVE. • DETROIT 12, MICH.
Offices in Principal Cities

MHS

For more details circle NED-1006 on enclosed inquiry slip

This Revolutionary NEW GRIP-STRUT GRATING

gives MAXIMUM STRENGTH with MINIMUM WEIGHT

RUGGED
LOW COST
NON-SKID
VERSATILE

A Globe patent feature (Patents Pending)

Not welded. Vertical members joined by integral saddles—side channel members and grating are a single unit—combines great strength with light weight. Simplifies installation—greatly reduces costs of construction. Easily replaces old or obsolete types of grating. Feature for feature, Grip Strut has a lower initial cost factor than any other type. Available in steel or aluminum.

WRITE FOR FULL DETAILS

GLOBE

The GLOBE Company
MANUFACTURERS SINCE 1914
4002 S. PRINCETON • CHICAGO 9, ILL.

For more details circle NED-1007 on enclosed inquiry slip

UNEQUALLED for safe, hard blows

C/R JAW-HEAD

A perfectly balanced tool. Tough, resilient water buffalo rawhide faces deliver needed power, yet protect fine finishes and delicate parts. Faces quickly and easily replaceable. Safety-Flare handle gives comfortable grip and prevents slipping. When you need a "soft" hammer, make sure it's a C/R *Rawhide* Jaw-Head.

Faces replaced in seconds

Merely loosening a nut releases jaws for replacing faces. When nut is tightened, faces are held in vise-like grip.

Available from leading industrial suppliers. Also C/R Rawhide mallets, mauls, solid head hammers.

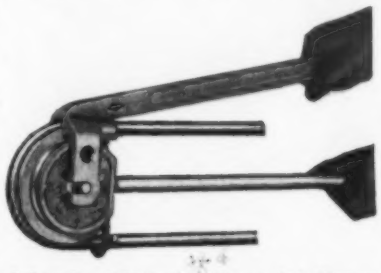
For further information write Dept. 22

CHICAGO Rawhide MFG. CO.
1301 Elston Ave., Chicago 22, Ill.
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

For more details circle NED-1008 on enclosed inquiry slip

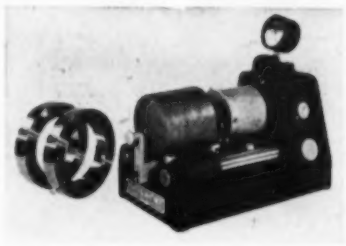
MANUAL TUBE BENDER
accommodates thin-wall metal tubing

Bends of any angle up to 180 degrees can be produced accurately in ½ and ⅝-in. OD copper, brass and other soft, thin-wall metal tubing with this No. 362-F 2-in-1 bender. Dual size shoe and mandrel accommodates both tubing sizes without changing parts. Tool slips over tube at point where bend is needed, and it can therefore be used on tubing where one end is connected. Calibrations show angle of bend. Made by **Imperial Brass Mfg. Co.**, 510 S. Racine Ave., Chicago 7, Ill.



For more details circle NED-1011 on enclosed inquiry slip

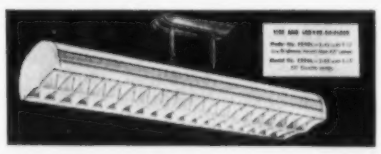
GAGING FIXTURE
checks compressor housing bores



Special Air-O-Limit gaging fixture for checking bores of refrigerator compressor housings has ball bushing slide on which housing is located from its outside diameter. Housings are deep drawn sheet steel, have an average internal diameter tolerance of 0.002-in. and maximum out-of-round tolerance of 0.015-in. Gage checks housing bore for average diameter at several points along entire length of internal wall. Ball bushing slide also moves housing on and off gaging plug which has six cartridge type gaging nozzles that feed from one gaging unit. Amount of air that escapes from these nozzles combines to give an average diameter reading on indicating meter calibrated with full scale of 0.016-in. Made by **Niles-Bement-Pond Co.**, Pratt & Whitney Div., 20 Charter Oak Blvd., West Hartford 1, Conn.

For more details circle NED-1012 on enclosed inquiry slip

FLUORESCENT LUMINAIRES
four 5-ft models have low glare



Elliptical reflector incorporated in four 5-ft long fluorescent luminaires in Sovereign line provides even distribution of light over all illuminated areas. Each offers high light output with low glare and low electrical input. Models 3245 and 3245L utilize two T17 40-w low brightness lamps, while models 3286 and 3286L take two 100-w krypton lamps, each of which gives equivalent of 100 w on input of 85 w. Models 3245L and 3286L have 5-ft louver made of 20-gage steel and lock louver feature for easy relamping and maintenance. Shielding angle on all 5-ft models is 40 degrees crossways and 30 degrees lengthwise. All are wired and ready for line lead connection in any 60 cycle 110-125 v circuit, individually or in rows. Made by **Mitchell Mfg. Co.**, Dept. N-2, 2525 N. Clybourn Ave., Chicago 14, Ill.

For more details circle NED-1013 on enclosed inquiry slip

ZIP OFF SCALE RUST PAINT with AURAND CLEANING TOOLS

AURAND rotary chipping action quickly, easily, thoroughly removes scale, paint, rust, and other accumulation from any hard surface. Renewable cutter heads and fool-proof cutting depth adjustment allow the unskilled operator to produce perfectly clean surfaces. Available in electric or pneumatic models. Write today for further information on cleaning your iron, steel, brick, concrete, and other hard surfaces.

Get the time and money-saving facts

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AURAND MFG. & EQUIP. CO.
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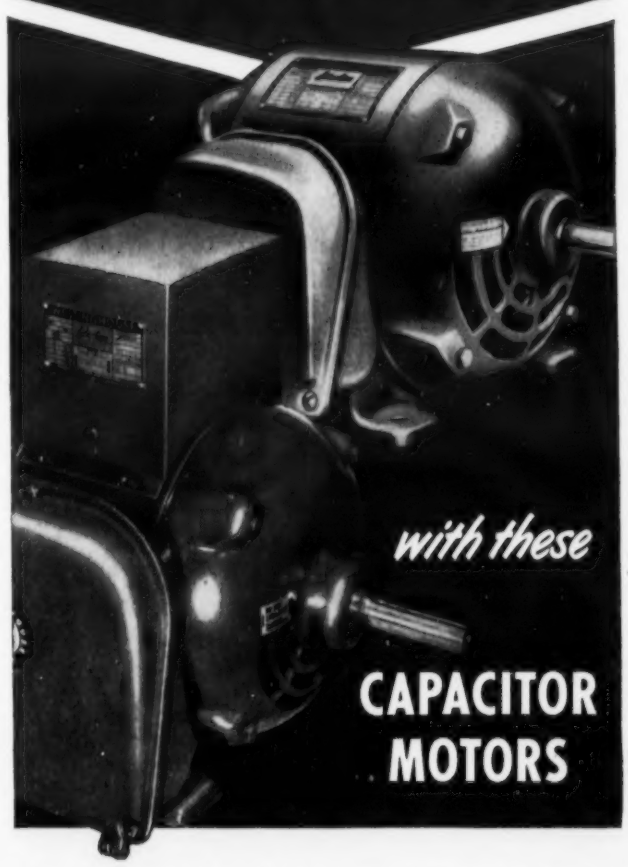
For more details circle NED-1009 on enclosed inquiry slip

HIGH TORQUE... LOW MAINTENANCE



with these CAPACITOR MOTORS

CAP motors tackle your heavy starting jobs with low line voltage drop... with minimum maintenance.

Simpler design of CAP motors does away with many parts which wear, break and corrode! No brushes to replace or adjust! No intricate winding of rotor to cause electrical failure... no commutator to clean, turn down or undercut.

Pre-lubricated, factory-sealed bearings do away with greasing schedules and eliminate bearing burnouts from faulty lubrication. Grease is sealed in... dirt sealed out. You'll never need lubricate these bearings!

All-steel construction of CAP motors assures sturdy protection against shocks, yet makes a smaller, lighter motor. Tuffernell® insulation...withstands moisture, abrasives and mild chemicals.

Learn the many other features of these capacitor motors (1—7½ hp). Ask your Westinghouse representative for the free booklet, B-5441, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-21677

YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line CAPACITOR MOTORS

For more details circle NED-1016 on enclosed inquiry slip

UNION Hand-operated PUNCH PRESS

• A rugged tool, suitable for small blanking, forming, perforating, assembling, etc.

Distance back from center of slide 1¾". Width of opening in back 1½". Stroke of slide ¾", adjustment 1⅛". Maximum die space 2⅛" as shown. This can be increased to any desired height by blocking up between base and bottom of press. Height overall 13½". Weight 46 lbs.

• WRITE FOR LITERATURE

THE UNION TOOL CO.
Precision Tool Makers
299 Norton St. • Rochester 5, N. Y.

For more details circle NED-1010 on enclosed inquiry slip

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DYNAPRENE is better because it lasts longer. It is made of an exceptionally tough neoprene compound developed after extensive research and experience. It is made by the continuous vulcanizing process that guarantees accurate centering and even cure, eliminating thin, weak spots. DYNAPRENE is a truly modern cord made to withstand the rigors of constant use yet is priced only slightly higher than other types of cord that need frequent replacement.

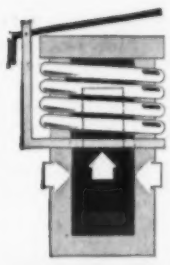
Be sure to specify Whitney Blake I.C. type SO, SJO or SV-type neoprene jacket for your cord requirements.

WHITNEY BLAKE CO.
WELL BUILT WIRES SINCE 1899
NEW HAVEN 14, CONNECTICUT

For more details circle NED-1014 on enclosed inquiry slip

STOP MOTOR BURNOUTS

eliminate heater replacements with THIS



Heinemann Motor Switches do not employ thermal warp elements or heaters, therefore they are not affected by surrounding temperature. No replacement parts are ever necessary.

Operating on a hydraulic-magnetic principle (illustrated at left), they allow starting inrush or momentary overloads but trip immediately on harmful overloads.

Heinemann Motor Switches will answer the need for complete motor protection and reduced maintenance in your plant.

Send for Bulletins 1010 and 1410.

HEINEMANN ELECTRIC CO.
106 Plum St., Trenton 2, N. J.

HEINEMANN MOTOR SWITCHES

For more details circle NED-1017 on enclosed inquiry slip

Yours for the ASKING

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Brief and highly detailed in its description of the various plastics and resins produced by Bakelite Company, the eight-page booklet describes dozens of interesting, economical applications of these versatile engineered materials. Fifty-six illustrations, a complete index, and a list of Bakelite Company sales offices ready to serve you are included, along with valuable technical data on physical, electrical and chemical properties.

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BAKELITE COMPANY, Dept. DL-53.
A Division of Union Carbide and Carbon Corporation UCC
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TRADE-MARK
PLASTICS

BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.

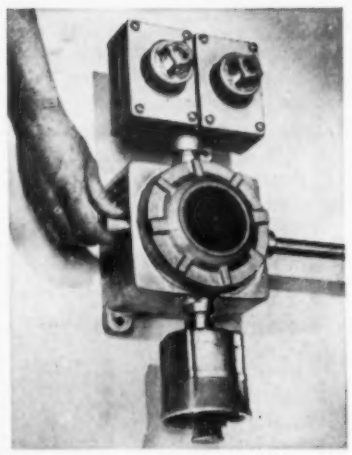
For more details circle NED-1018 on enclosed inquiry slip

ELECTRIC BOX FURNACE
operates at temperatures to 2000° F

Having chamber size of 15 x 12 x 30 in., this larger model has been added to the BL line of electric box furnaces. Designed for operating temperatures up to 2000° F, furnace uses imbedded slab form heating elements which are readily replaceable through door opening with minimum of downtime. These ceramic slabs protect wire from atmospheric attack and are located on all sides and top and bottom of chamber. Elements act as baffle walls, and natural air convection is created in unrestricted air spaces around them to equalize temperatures. Movable wall type door is fully counterbalanced and seals entire front of furnace from heat loss. Made by **Cooley Electric Mfg. Corp.**, Dept. F-3, 915 Daly St., Indianapolis 2, Ind.

For more details circle NED-1019 on enclosed inquiry slip

COMBUSTIBLE GAS ALARM
warns against build-up of explosive vapors either indoors or outdoors



Completely explosion-proof, model EE combustible gas alarm is installed directly in suspected atmosphere, either indoors or out. By convection and diffusion, surrounding atmosphere is subjected to continuous watch against build-up of any kind of explosive vapors.

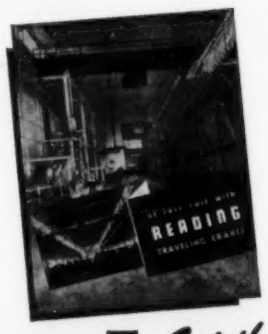
Presence of such vapor is signalled by red indicator light as well as by remote alarm units of various types which can be connected to terminals of equipment. While the standard alarm point is established at 0.2 of the lower explosive limit, other values can be provided. Either self-reset or lock-in arrangements can be furnished to give choice of on-off indication of gas or one which must be reset manually. The sensing element can be placed remote from indicator, if desired.

Trigger type electronic tube circuit is employed to convert sensing unit signals into alarm indications. Standby power consumption for 115-v line is 15 watts. Device is applicable in processing, industrial and commercial plants or areas where gas or volatile liquids are used, stored or handled. Made by **Johnson-Williams, Ltd.**, 2614 Third St., Palo Alto, Calif.

For more details circle NED-1020 on enclosed inquiry slip

FOR THE CRANE & HOIST USER . . .

"The WHY and HOW of Faster Production"



If you're searching for new ways to reduce materials handling costs . . . If you want to check your handling operations against installations in *other* plants . . . here's information you'll want! The 16-page booklet "The *WHY* and *HOW* of Faster Production" shows, through photos and sketches, how you can improve crane performance and reduce costs through a unique method of "tailored" crane construction. Mail coupon today.

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READING HOISTS & CRANES
Reading Crane & Hoist Corp.
2105 Adams St., Reading, Pa.

Please send us your free booklet "The *WHY* and *HOW* of Faster Production". I understand there is no obligation.

Name____ Title____
Company____
Address____
City____ Zone____ State____

For more details circle NED-1021 on enclosed inquiry slip

Convince Yourself WITH THIS TEST!

See How VOLAX Removes Printing Ink COMPLETELY without Irritating Skin!

1. Ask a pressman to dip his hands in printing ink—it's stubborn . . . hard to remove.

2. Have him use VOLAX Hand Cleaner—ink's off in a jiffy—and safely too!

Your DOLGE Service Man will be glad to demonstrate

VOLAX is designed for heavy-duty skin cleansing. It contains mild soaps, water softener and friable volcanic ash . . . removes ground-in printer's ink with a gentle, non-irritating action. VOLAX is the specific cleaner for tough, ground-in dirt and ink discoloration.

VOLAX
dependable DOLGE
WESTPORT, CONNECTICUT

For more details circle NED-1022 on enclosed inquiry slip

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Choose COVEL No. 15

6 x 18 SURFACE GRINDER

LARGE DIAMETER GRINDING WHEEL MOUNTED ON 3-SPEED SPINDLE
•
EXTRA CAPACITY
•
RIGID CONSTRUCTION
•
SMOOTH ACTING HARDENED AND GROUND LEAD SCREWS AND KNEE WAYS
•
LONG-WEARING HARD CHROME TABLE WAYS

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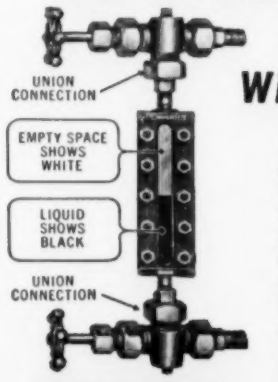
COVEL PRECISION GRINDERS
BENTON HARBOR — MICHIGAN
DRILL GRINDERS — UNIVERSAL CUTTER & TOOL GRINDERS — HYDRAULIC & HAND FEED SURFACE GRINDERS

PROMPT DELIVERIES FOR DEFENSE

For more details circle NED-1023 on enclosed inquiry slip

PENBERTHY LIQUID LEVEL GAGES

Can be Removed and Replaced Without Shutdown



PENBERTHY REFLEX GAGE

Union connections between the gage and the valves permit removal of gage for repairs without shutting down the equipment. Just close the valves, uncouple the unions and remove the gage. The convenience of this is obvious. When glasses have to be replaced or repairs made, it is not necessary to work in an awkward position or to shut down. Another advantage: a gage needing repairs can be replaced immediately by a spare and the repairs made at leisure. There are many other reasons for the superiority of Penberthy Liquid Level Gages; ask for Catalog 35.

PENBERTHY PRODUCTS

PENBERTHY INJECTOR COMPANY
DIVISION OF THE BUFFALO-ECLIPSE CORPORATION
Established 1886 DETROIT 2, MICHIGAN Canadian Plant, Windsor, Ont.

For more details circle NED-1024 on enclosed inquiry slip

NEW FRACTIONAL to 20 G.P.M. POLYETHYLENE PUMPS

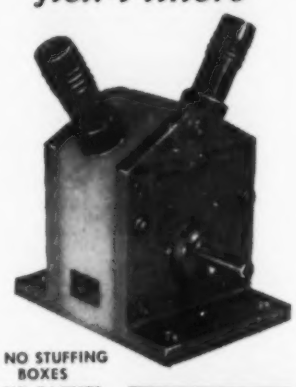
ESPECIALLY DESIGNED TO HANDLE HCl, HF, NaOH, H_2SO_4 DISTILLED H_2O, $FeCl_3$, $Ca(OH)_2$ and many others

WITH NATURAL RUBBER, PURE GUM, NEOPRENE, BUNA, HYCAR

"flex-i-liners"

FLUID NEVER TOUCHES METAL

Fluid only contacts outer surface of "FLEX-I-LINER" and inner surface of body block. 35 combinations of rubber and plastic "flex-i-liners" and pump body blocks. Models available from fractional to 20 G.P.M; Vinyl and Compar "flex-i-liners" also available in pumps to 5 G.P.M. capacities. Widely used in chemical, food, pharmaceutical and other process industries—wherever non-contaminating pumping is required. Excellent for slurries. Write for literature.



NO STUFFING BOXES
NO GASKETS
NO VALVES
SELF LUBRICATING

VANTON NON CORROSIVE CONTAMINATING *flex-i-liner* PUMPS

VANTON PUMP CORP.
EMPIRE STATE BLDG., Dept. NE-2, New York, N. Y.

For more details circle NED-1025 on enclosed inquiry slip

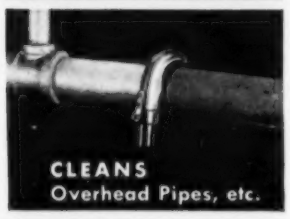
HILD Heavy-Duty PORTABLE VACUUM

Always Ready for Wet or Dry Dirt Removal

No adjustments to make...no filter to change when switching to wet pick-up work. Moisture in vacuum air stream cannot damage HILD Bi-Pass Motor. Special attachments for scores of clean-up jobs. Two sizes: 10 or 40 gallon liquid capacity.

SWEEPS
Dust and Dirt

DRIES
Scrubbed Floors



CLEANS
Overhead Pipes, etc.

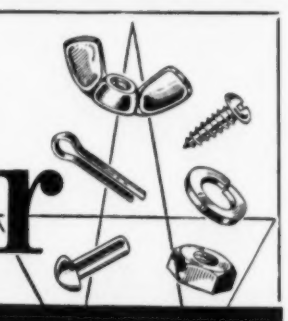
1927-1952 HILD System MAINTENANCE EQUIPMENT & SUPPLIES OUR 25TH YEAR

Write for FREE CIRCULAR

HILD FLOOR MACHINE CO.
740 W. Washington Blvd., Dept. NE-2 Chicago 6, Ill.

For more details circle NED-1026 on enclosed inquiry slip

ask star



FOR STAINLESS STEEL FASTENINGS OF ALL TYPES

RIGHT OFF THE SHELF

• Cap Screws • Machine Screws • Sheet Metal & Wood Screws • Set Screws, Nuts, Washers, Etc.

Small or large quantities.

Class 3
AN Drilled F'lis'er Heads

Fast service on special screw machine products.

WRITE, WIRE OR PHONE TODAY

Star STAINLESS SCREW CO.
214 UNION AVENUE • PATERSON 2, N. J.
ARmory 4-1240

For more details circle NED-1027 on enclosed inquiry slip

HYDRAULIC POWER UNIT

packaged pump develops pressures to 5000 psi in 15, 30 and 50-hp sizes

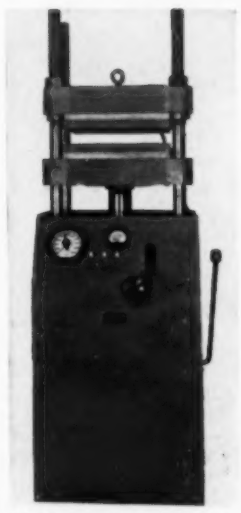
Power for all types of hydraulic systems can be provided by this compact high-pressure triplex pump. It is available in 15, 30 and 50-hp sizes with pressure ratings up to 5000 psi and displacement ratings up to 60 gpm. Special 10,000-psi and 20,000-psi models are offered also. Of packaged design, pump incorporates integral gears in wide variety of ratios. Unit can be supplied with integral drip-proof Sterling electric motor for simplified installation.

Plungers and liners are interchangeable so that variety of pressure and volume ratings is possible for each pump. Spring-loaded balls and hardened and ground seats serve as inlet and outlet valves. Additional features are pressure lubrication, built-in pressure gage, relief valve and scavenging pump. It is designed for continuous duty service in wide range of installations. Made by **Kobe Inc.**, 3040 E. Slauson Ave., Huntington Park, Calif.

For more details circle NED-1028 on enclosed inquiry slip

HYDRAULIC LABORATORY PRESS

automatic, self-contained unit has 100,000-lb total available force

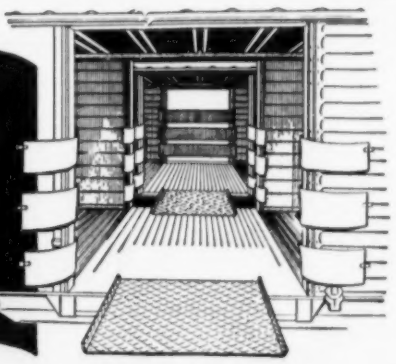


Designed for pilot run and general production in plastic, rubber and wood laminating operations, automatic self-contained hydraulic laboratory presses are built in models 50-15M with 12 x 15-in. platens and model 50-24M with 18 x 24-in. platens. Hydraulic pump driven by motor through variable speed pulleys can operate at high speed for rapid closing of platens, or at low speed to afford or maintain needed pressures. Total available force of 100,000 lb is provided by hydraulic mechanism with 7-in. stroke.

Feature of press is distinct paralleling of platens accomplished by precision boring of guide holes. Columns, hard chrome plated for high wear resistance, provide maximum daylight opening of 15½ in. Thermostats control electrical heating elements in platens, and dial light shows when current is functioning. Millivoltmeter calibrated in degrees Fahrenheit indicates temperature of platens and selector switch enables operator to read temperature of either at will. Available for either 115-v or 230-v ac operation, presses are finished in gray enamel. Made by **Wabash Metal Products Co.**, Dept. NED, 1568 Morris St., Wabash, Ind.

For more details circle NED-1029 on enclosed inquiry slip

between you and shipping losses



SIGNODE RETAINING STRIPS

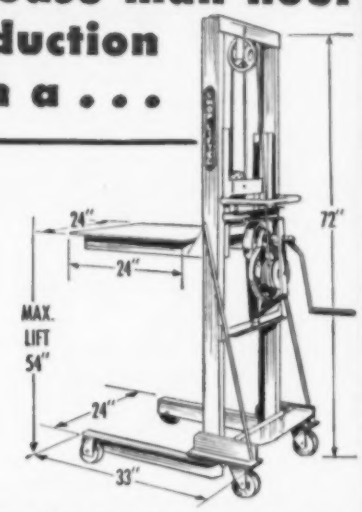
New six years ago . . . since proved through thousands and thousands of successful applications . . . Signode Retaining Strips provide low-cost doorway protection for carload shipments of packaged products. As illustrated, they are easily applied and draped back out of the way for through-car loading. When loading is complete, the strip halves are rejoined by tensioning and sealing the supporting straps. Made of heavy kraft paper, reinforced top and bottom with strong Signode Strapping, they reduce dunnage weight, eliminate need for car doorway liner, speed unloading. *For full details write . . .*

SIGNODE STEEL STRAPPING CO.
2643 N. Western Ave., Chicago 47, Illinois

THIS SEAL MEANS SIGNODE SECURITY IN SHIPPING

For more details circle NED-1030 on enclosed inquiry slip

Cut accidents Increase man hour production with a . . . SHOPLIFTER



Handles heavy dies from storage rack to press. Lifts barrels, boxes, loads trucks, makes a handy adjustable shop table. Automatic brake holds load at any height.

Type D —Hand operated CAP. 500 lbs. $183.60
Type DE—Electric operated CAP. 500 lbs. $412.08
Type DX—Hand operated CAP. 1000 lbs. $349.52
Type DX—Hand operated CAP. 2000 lbs. $417.52
Floor lock included. Prices net. F.O.B. Chicago

ECONOMY ENGINEERING CO.
4519 W. Lake St., Chicago 24, Ill.

For more details circle NED-1031 on enclosed inquiry slip

4 CYCLE
BRIGGS & STRATTON
GASOLINE ENGINES

Preferred power for self-contained refrigerating units on motor-cargo trailers — the world's most widely used single-cylinder gasoline engines.

BRIGGS & STRATTON single-cylinder, 4-cycle, air-cooled gasoline engines are the "Preferred Power" leader—on equipment, machines, tools, appliances used by the transportation, construction, oil-fields and other industries—and on farms.
Briggs & Stratton Corporation,
Milwaukee 1, Wisconsin, U. S. A.

In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

For more details circle NED-1032 on enclosed inquiry slip

WHY "sweat it out?"

WHEN Conveyors will move it faster...cheaper

How many material handling jobs are you still doing the hard way? How many precious man hours, dollars and minutes are you spending to move materials from here to there?

Whether it's bags, boxes, barrels, bales or bulk . . . whether it's unloading, loading, transporting, lifting or lowering, chances are that a Lippmann Conveyor or combination of them will show substantial savings in time, men and money.

Lippmann is headquarters for all kinds of conveyors, and 28 years of manufacturing and application experience. Lippmann engineers are ready and eager to help you solve your material handling problems. A card or letter will bring prompt and sincere attention to your regular or special requirements.

LEW LIPPMANN ENGINEERING WORKS

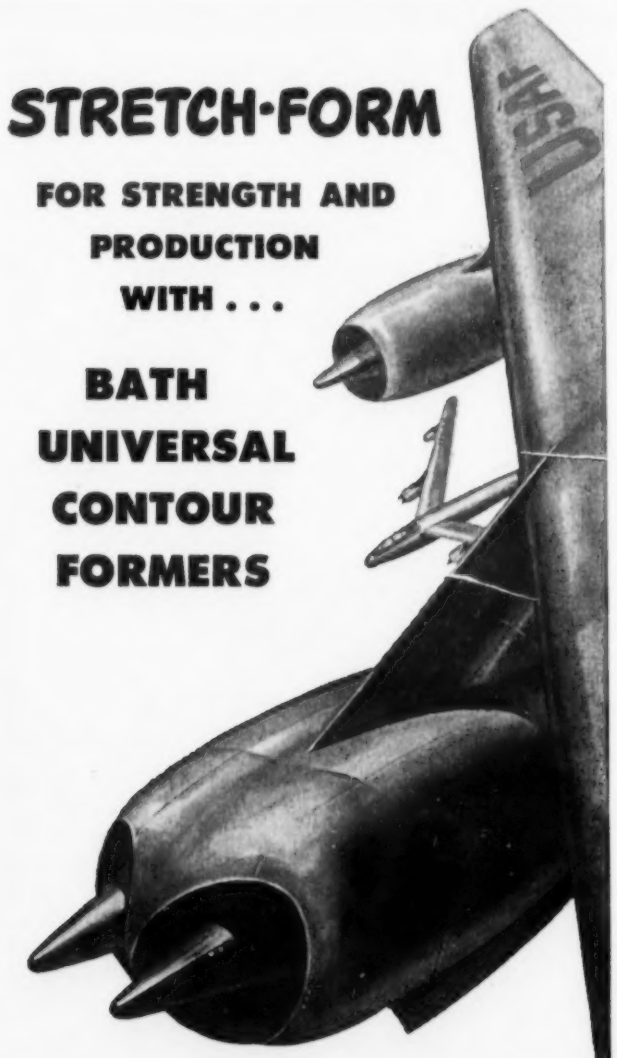
4631 W. Mitchell St., Milwaukee 14, Wisconsin

▲ For more details circle NED-1033 on enclosed inquiry slip ▲

STRETCH-FORM

FOR STRENGTH AND PRODUCTION WITH . . .

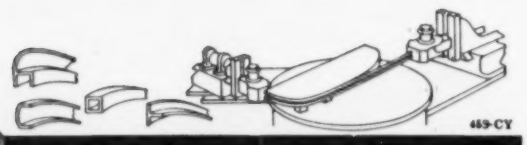
BATH UNIVERSAL CONTOUR FORMERS



Now . . . aircraft components* can be formed at high production rate with the powerful **Bath** universal contour former. Blanks of any metal or alloy can be formed to extremely exacting tolerances in one operation. Forming bends of more than 360° and varying curves, *the* **Bath** *machine produces in one operation parts that previously were assembled from separate sections.*

Extruded, rolled, pressed or brake-formed cross sections in any length can be shaped on the **Bath** universal contour former. Twelve models are available with capacities ranging from 12½ to 150 tons to meet every metal contour forming requirement.

*Jet flange rings, shrouds, cases, flame tubes, stiffeners and casings formed in either full circles or segments.



469-CY

THE CYRIL BATH COMPANY

6983 Machinery Ave. Cleveland 3, Ohio

▲ For more details circle NED-1034 on enclosed inquiry slip ▲

FOOT-OPERATED VISE
hydraulic tool applies 7½-ton grip

With a few easy strokes on foot pedal, pressures up to 7½ tons can be obtained to grip any work securely for assembly, production or maintenance work on this Speedvise. It speeds forming, punching, pressing, bending, straightening, cutting, testing, stamping, riveting and many other operations. One pedal provides fast action in drawing up to work, second applies and holds required pressure and third releases vise. Both hands of user are free to handle work or tools. Model 500 develops pressures to 5 tons and model 750 applies 7½ tons maximum. Made by **Studebaker Machine Co.**, 1222 S. Ninth Ave., Maywood, Ill.

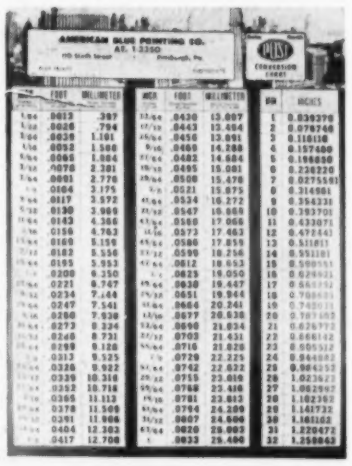
▲ For more details circle NED-1035 on enclosed inquiry slip ▲

TIN PLATE LUBRICANT
has palm oil characteristics

Produced entirely from domestic materials, Palmoshield lubricant for tin plate and other rolling operations has appearance, performance and chemical characteristics of palm oil. Use requires no changes in rolling mill operation. It is subject to exact chemical control. Product has satisfactory characteristics in cleaning, annealing and temper rolling and hot dip and electrolytic tinning. It can be reclaimed with good results in both yield and product. Available on commercial basis, lubricant does not deteriorate from extended storage. Made by **Ironsides Co.**, 270 W. Mound St., Columbus, O.

▲ For more details circle NED-1036 on enclosed inquiry slip ▲

METRIC EQUIVALENT WALL CHART
also contains decimal equivalents



Conversion of inches to feet and metric equivalents is facilitated by chart C which measures 17 x 22 in. and is protected with metal strip at both top and bottom. Tabulated are decimal foot and millimeter equivalents for fractions of inch from 1/64 to 1 in. in increments of 1/64-in., and also six-place decimal inch equivalents of 1 to 32 millimeters. On other side of chart are found standard decimal equivalents. Chart C is available free of charge from **Frederick Post Co.**, 3650 N. Avondale Ave., Chicago 18, Ill.

▲ For more details circle NED-1037 on enclosed inquiry slip ▲

"Costs cut, output tripled with Irvington No. 123 Varnish" HANOVIA Chem. & Mfg. Co.

"We've improved the quality and cut the production cost of our transformers by impregnating the *entire transformer* with IRVINGTON No. 123 Internal Curing Varnish." That's the statement made by Mr. N. J. Frizen, Plant Manager of Hanovia Chemical and Manufacturing Co., the world's largest producer of ultraviolet equipment for industry and the medical profession.

Other advantages of No. 123: thorough cure. Excellent flexibility and oilproofness. Firm adherence to underlying surface. Long life at temperatures up to 130° C.

Get the full story—write for technical data sheet.

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON VARNISH & INSULATOR COMPANY

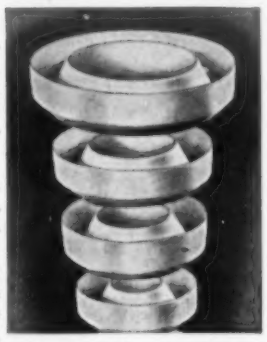
IRVINGTON 11, NEW JERSEY

Plants: Irvington, New Jersey; El Monte, California; Hamilton, Ont., Canada

▲ For more details circle NED-1038 on enclosed inquiry slip ▲

Teflon "V" Rings constitute closest possible approach to a universal packing . . .

Newest Crane Packing Company "Chemlon" Product Features Special Molding Process and Patented Cross-Section Design



USES: All types of valve requirements, including rotary, spiral and reciprocating stem action; many centrifugal and rotary pumps; all reciprocating pump applications.

FEATURES: Molded from pure Teflon having chemical inertness unsurpassed by any other known packing material. These rings resist operating temperatures from as low as —94°F up to 500°F. They positively will not shrink, swell, harden, dissolve, corrode or deteriorate with age. Low friction characteristics cannot be matched; 1/15 that of compression packing is not unusual.

DESCRIPTION: Chemlon V Rings are furnished in a large number of stock sizes; additional sizes can be molded at a very nominal extra charge. Cross-section design allows effective sealing at finger tight gland pressure. Special molding process gives rings extra resiliency.

SOURCE: Crane Packing Co., Dept. NE-2, 1811 Cuyler, Chicago 13, Ill. Write for information on Teflon V Rings . . . and the complete Chemlon line of braided, molded, extruded and machined Teflon products.

JOHN CRANE TRADE MARK

▲ For more details circle NED-1039 on enclosed inquiry slip ▲

Hy-Test Steam Hose...

Can't Burst!

For handling superheated or saturated steam in any heavy-duty industrial steam service. When long service finally causes the tube to fail, the braided-wire plies permit the steam to merely *seep* through—giving workmen ample warning that replacement is needed.

See your local NYB&P Distributor for any industrial rubber products. He can save you time and money.

NEW YORK BELTING & PACKING CO. Since 1846

NEW YORK BELTING & PACKING COMPANY

1 MARKET STREET, PASSAIC, NEW JERSEY

▲ For more details circle NED-1040 on enclosed inquiry slip ▲

The Case Of The Haunted Engineer

This engineer is haunted by thermometer installation problems.

Smart purchasing agent suggests: "How about: WEKSLER ADJUST-ANGLE INDUSTRIAL THERMOMETERS?"

"Hello, WEKSLER?" Engineer goes into action! "Send over plenty of ADJUST-ANGLE INDUSTRIAL THERMOMETERS!"

The bottleneck spell is broken. WEKSLER ADJUST-ANGLE INDUSTRIAL THERMOMETERS solve all plant installation problems without complicated calculations! They adjust to ANY angle . . . through a 180° arc!

Today—find out how WEKSLER can make things smoother in YOUR plant! Ask your jobber for Important Free Bulletin AA50, or write to:

WEKSLER N.Y.C. "Industrial America's Right Arm"

THERMOMETER CORP. 52-56 W. Houston St., N. Y. 12, N. Y.

For Glass Engraved on Stem Thermometers and Hydrometers, Send for Catalog 225.
For Dial Indicating and Recording Pressure Gauges, Send for Catalog 525.
For Dial Indicating and Recording Thermometers, Send for Catalog 325.

▲ For more details circle NED-1041 on enclosed inquiry slip ▲

YOU CAN TAKE IT WITH YOU!

BECKER
Self-Contained
SPRAY GUN
PRESSURE-POWERED
with
INEXPENSIVE
CO2
CARTRIDGE

This *completely* portable spray gun is saving money in many industrial uses. Excellent for maintenance operations. Requires no compressor, motor, or electrical outlet. Has 21 liquid ounce capacity, heavy-gauge, steel container; cast aluminum head; brass and stainless steel inserts. Low cost CO2 cartridge sprays up to one container full, depending on viscosity. Use it for paint, varnish, enamel, oil, fire-proofing, rust-proofing, disinfecting. If your industrial distributor can't supply you, order direct and we will ship postpaid. (Extra CO2 cartridges 10 for $1, postpaid, or buy them from your local dealer.)

ONLY $15.95 *with three cartridges*

SULLIVAN BECKER CO., DEPT. 172-B Kenosha, Wis.

For more details circle NED-1042 on enclosed inquiry slip

Here's TROUBLE-FREE FLOW CONTROL
. . . for corrosive services

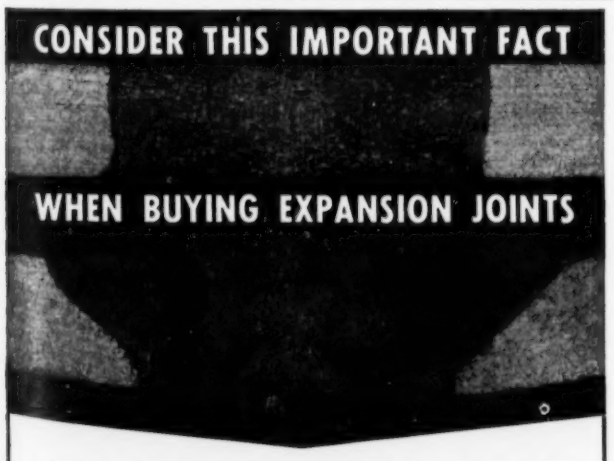
Hills-McCanna Valves are suitable for air, water, gases, volatile and viscous substances, semi-solids, etc. Hand-wheel or lever operated or choice of automatic or remote operators. Choice of 14 diaphragm materials; 49 body materials. Sizes ⅜" to 14". Write for catalog.

HILLS-McCANNA CO.
2455 W. Nelson Street • Chicago 18, Illinois

HILLS-McCANNA
saunders patent diaphragm valves
Also manufacturers of — Proportioning Pumps
Force-Feed Lubricators • Magnesium Alloy Castings

For more details circle NED-1043 on enclosed inquiry slip

CONSIDER THIS IMPORTANT FACT



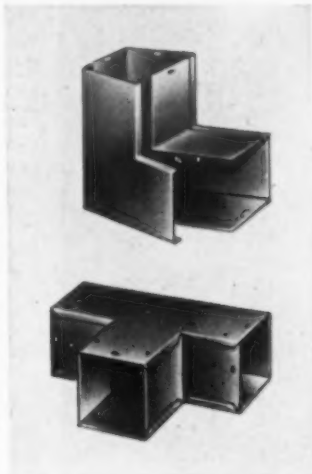
WHEN BUYING EXPANSION JOINTS

Compare the fine grain longitudinal weld of a Zallea Expansion Joint (1) with the ordinary weld bead of a competitive joint (2). Under brutal flexing tests to destruction, not one Zallea Joint failed at the weld! More important, Zallea bellows lasted up to *8 times longer* than those having ordinary weld beads. Want more particulars? Then send today for Catalog 47. It contains facts and figures to *prove* that your best buy in an expansion joint is Zallea. Zallea Brothers, 818 Locust St., Wilmington 99, Delaware.

Zallea

For more details circle NED-1044 on enclosed inquiry slip

WIREWAY FITTINGS
elbows and tees are flangeless



Added flexibility in meeting wiring layout requirements is provided with flangeless type 90-degree elbow and tee fittings for line of flangeless wireways. Sizes to fit either 4 or 6-in. square wireways are available. Brake-formed from heavy gage steel and painted for corrosion resistance, fittings have edges formed for easy push-fit with wireways. Fittings are stocked and have Underwriters' Laboratories approval. Made by **Keystone Mfg. Co.**, 23330 Sherwood Ave., Center Line, Mich.

For more details circle NED-1045 on enclosed inquiry slip

WATER SHEDDING COMPOUND
aids in stainfree drying of metals

Water films remaining on metal parts can be displaced or repelled by No. 51 water displacing liquid to facilitate rapid, stainfree drying. Product is light liquid that forces water out of crevices and holes in parts with light agitation. Tarnishing, staining and deposition of solid residues are prevented by thin film remaining after evaporation of solvent at room temperature. This film is easily removed by vapor or liquid solvent degreasing if clean surface is required for subsequent lacquering or enameling. Combination of liquid No. 51 and emulsion cleaner 75 offers method of cold cleaning in toolrooms or machine shops to remove oil, dust, chips and solid dirt. Formulated by **Enthone, Inc.**, Dept. NED, 442 Elm St., New Haven 2, Conn.

For more details circle NED-1046 on enclosed inquiry slip

CHAIN CONNECTING LINKS
two sizes connect ¼ to ¾-in. chains

Only two sizes of Wedglok universal-designed connecting links are needed to connect any size chain from ¼ to ¾ in., depending upon type of chain used. Thus, distributors and users need not maintain complicated stocks for making chain or wire rope connections or emergency repairs. Links allow users to assemble chain slings from running lengths of chain right on the job without special equipment. Standard links are available in sizes up to 3 in. and are used in materials handling; chain operations in steel mills, foundries and industrial plants; oil fields; strip mining; logging and on construction jobs. Made by **Interstate Drop Forge Co.**, Products Div., 4001 N. 27th St., Milwaukee 9, Wis.

For more details circle NED-1047 on enclosed inquiry slip

MOVE GIANT CRATES
and heavy Machinery
with ROL·A·LIFTS

Handles crates up to 30 feet long!

NOTHING ELSE DOES THESE JOBS AS WELL!

HEAVY MACHINERY—Two men move giant presses, cutters, breakers, lathes, etc.

RUGS—Rol-A-Lifts move crated rugs through narrow aisles and in or out of storage.

BULKY CRATES—Butter churns, air-conditioners, "overseas-boxed" equipment are easily handled.

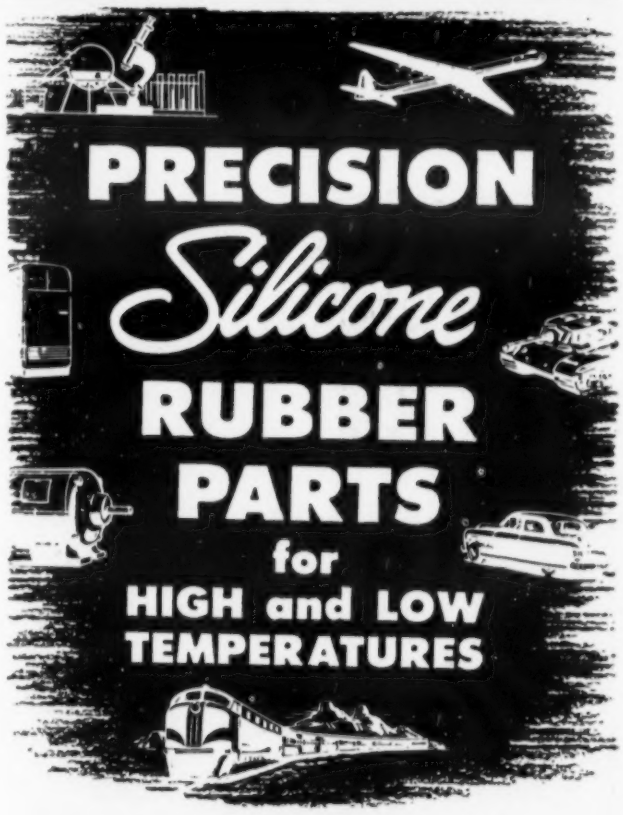
Lifts up to 10,000 pounds!

REDUCE COSTS, speed up handling of giant, clumsy crates, heavy machines, counters and similar unwieldy items. Built-in hydraulic jack on Rol-A-Lift *lifts* crates up to 10,000 pounds, puts them on wheels ready to roll. Load is lowered at controlled speed. Full-swiveling casters for easy maneuvering. Two, four, six, eight and ten thousand-pound capacities. Write for folder and prices.

SKARNES
ENGINEERING & SUPPLY CO., INC.
2907 E. Franklin Ave. • Minneapolis 6, Minn.

For more details circle NED-1048 on enclosed inquiry slip

For more details circle NED-1049 on enclosed inquiry slip



- Retain properties from —110° to +500° F.
- Resist weathering, moisture, oxidation, ozone
- Withstand many chemicals and lubricating oils
- Will not turn to carbon despite heat

STALWART silicone rubber parts assure dependable operation under severe service conditions. They retain their desirable physical, chemical and dielectric properties over a 600°F. temperature range.

Parts fabricated from silicone stocks are resistant to permanent compression, prolonged weathering, ozone, ultra-violet light, chlorinated hydrocarbons, lubricating oils and many chemicals.

STALWART is prepared to mold, extrude, punch, lathe-cut and mandrel-build precision silicone rubber parts to meet individual, S.A.E. and A.S.T.M. specifications.

SILICONE RUBBER STOCKS

Compound Number	Hardness Shore A Durom	Tensile Strength (p.s.i.) Avg.	Tensile Strength (p.s.i.) Min.	Elongation per cent Avg.	Elongation per cent Min.	Temperature Range (°F.) Low	Temperature Range (°F.) High	Compression Set % at 300° F.	Dielectric Strength volts/mil	Color (Also Clear)
*Silastic 150	45 to 55	360	>250	230	>200	<−70	+500	40 to 60	500	White
160	55 to 65	490	>400	180	>150	<−70	+500	50 to 70	500	White
180	75 to 85	700	>575	85	>60	−90	+500	70 to 90	650	White
181	75 to 85	670	>550	85	>60	−80	+500	60 to 90	800	Gray
6-181	75 to 85	680	>500	65	>50	<−110	+500	40 to 60	800	Gray
250	40 to 55	650	>550	200	>250	<−110	+500	40 to 60	800	Orange-tan
**G-E 81223	40±5		800		400	−85	+550	65 to 75	480	†
**G-E 81271	50±5		800		250	−85	+550	65 to 75		†

399-SR

Write today for Catalog No. 51SR-1.

STALWART RUBBER COMPANY
200 Northfield Road • Bedford, Ohio

For more details circle NED-1050 on enclosed inquiry slip

YOU WON'T GO WRONG with a

Sta-Warm electrically heated COMPOUND MELTER

There's a size and type of compound melter, with accessories to suit, for almost every production and laboratory requirement. The Sta-Warm "standard" line of pots, kettles and tanks fits 90% of your production requirements. Sta-Warm "engineered" pots, kettles and tanks are offered to fill the unusual requirement. These heaters are designed especially for you.

Are you aware of all that Sta-Warm offers you in compound and soft metal melters today? Inquire, outlining your problem. A reply by early mail, with specific suggestions based on many years of compound heating experience, will come back to you. Why not investigate Sta-Warm today?

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-1051 on enclosed inquiry slip

UNIVERSAL DRILL BUSHINGS establish new standards of high quality

Universal Drill Bushings, produced at the big, modern plant of the Universal Engineering Company, have been first in industry for more than 25 years. They are accurately machined with superhoned bores from the finest quality steel and carefully inspected to insure maximum efficiency and extremely long life. Write today for complete information.

The modern home of finer production tools

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN 156-A

For more details circle NED-1052 on enclosed inquiry slip

ADJUSTABLE
BEAM CLAMPS

FOR LOADS UP TO 1500 LBS.

MOTOR PLATFORMS . . . BLOWERS . . . CONVEYORS . . . EXHAUST DUCTS . . . HEATERS . . . LIGHTING FIXTURES . . . and other types of OVERHEAD or WALL-MOUNTED EQUIPMENT can be attached quickly and easily to building structural members with THOMPSON ADJUSTABLE BEAM CLAMPS.

These galvanized, cast malleable iron clamps are available in light and heavy-duty types for attachment to the flanges of I, L, inverted T, or H-beams ranging from 3" to 8½" in width as well as to trusses and girders consisting of angles or channels back-to-back.

Accurate vertical suspension from sloping members, columns and wall posts is facilitated by a high-strength aluminum alloy THOMPSON ADJUSTABLE ANGLE FITTING.

Use THOMPSON BEAM CLAMPS to eliminate costly, time-consuming installations for equipment weighing up to 1500 pounds.

WRITE FOR CATALOG No. 50 FOR COMPLETE DETAILS.

1887E
THE THOMPSON ELECTRIC CO.
1138 POWER AVENUE • CLEVELAND 14, OHIO

For more details circle NED-1053 on enclosed inquiry slip

CREEP RECORDERS chart rolls give 300-day record

Two recorders have been developed for use with Baldwin lever type creep machines and 4000-lb creep-relaxation testing machine. Specimen deformation of 0.020-in. produces full scale pen carriage movement of 10 in. across strip chart. Chart is driven at ¼-in. per hour by synchronous motor. Chart roll 150 ft long gives a 7200-hour record.

For creep-relaxation records, conventional Microformer type strip chart recorder is offered. Lowering of stress in specimen, maintained at constant tensional strain at any temperature up to 1800° F is recorded by conventional Microformer type servo system operated as an extensometer on spring block loading device through which constant strain is maintained. Announced by **Baldwin-Lima-Hamilton Corp.**, Dept. T.E., Philadelphia 42, Pa.

For more details circle NED-1054 on enclosed inquiry slip

MASONRY WALL INSULATION pour-type glass fiber is resistant to rot, termites, fire and settling

Developed after extensive test and studies by the Structural Clay Products Research Foundation, pouring-type Fiberglas Cavity Wall insulation has good thermal resistance, density low enough to support its own weight without settling, and ability to resist moisture. The inorganic nodules of fibrous glass resist rot, termites and fire.

SCR Insulated Cavity Wall consists of two wythes of brick, or one of brick and tile. Between these is an air space not less than 2 in. wide. Insulation is poured from bags into this wall cavity after proper construction steps have been taken. Nonrusting metal ties are used to tie the two wythes together. Inner wythe is built upward, ahead of the exterior wythe by at least 16 in. After cavity side of inner wythe is smoothed, it is given a brush coat of vapor-resistant water emulsion paint which serves as vapor barrier. Insulation is poured into cavity when wall reaches window height and, after that, at convenient intervals.

Tests indicate that insulated Cavity Wall sections have heat transmission less than half that of same wall with furring and lath. Insulation is furnished in 30-lb paper bags which will fill 37 to 45 sq ft of wall having cavity 2 to 2½ in. wide. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

For more details circle NED-1055 on enclosed inquiry slip

LOWER COST HANDLING of BARRELS, DRUMS

SABIN ONE MAN BARREL TRUCK

A MODERN LABOR SAVER. One man can easily pick up and move containers weighing up to 800 pounds. He runs truck up to container, hooks on at top and pulls back on handle —that's all.

THIRD WHEEL FEATURE ensures better balance and added safety in moving loads.

WRITE FOR BULLETIN NO. 48-A

We also make Tote Pan, Box, Carboy, Keg and many other types of One-Man Trucks.

The New Way
ONE MAN INSTEAD *of two or three*

THE SABIN MACHINE CO.
6536 Carnegie Avenue
Cleveland 3, Ohio

For more details circle NED-1056 on enclosed inquiry slip

THE SCRAP SHORTAGE

Makes a "CANTON" Alligator Shear an even more important piece of equipment for EVERY METAL WORKING PLANT!

● This low priced "Canton" Model 11-A Shear has an adjustable knife seat, 24" knives, is bronze bushed throughout and will cut 2" squares in mild steel or 3/8" x 24" in plates. "Canton" Shears are made in a complete range of sizes for processing all types of scrap.

Send for Bulletin 52-N

The HILL ACME CO.
"CANTON" DIVISION 1209 W. 65TH ST., CLEVELAND 2, OHIO

For more details circle NED-1057 on enclosed inquiry slip

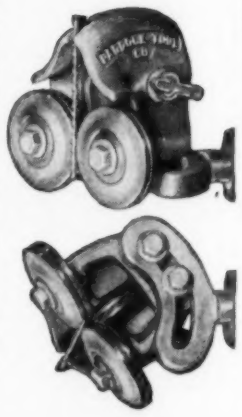
MORE SPEED MORE SUPPORT

SAVE MONEY—

Protects Blades

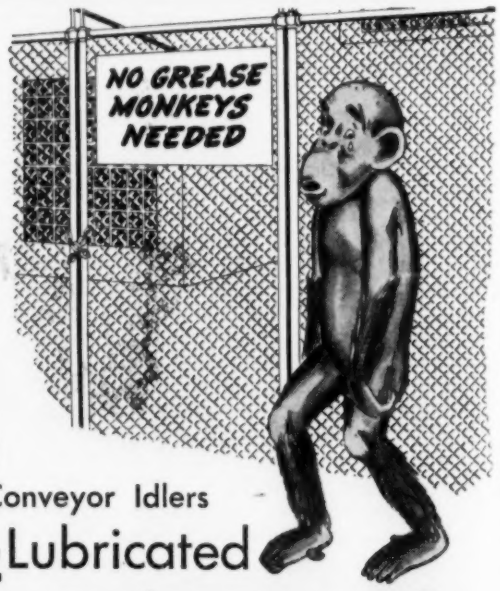
SPEEDS UP PRODUCTION!

Here's a low cost way to reduce costly Blade Breakage—enable old or new Band Saws to cut more material—protect workmen! PADDOCK GUIDES hold working portion of blade as if in a frame. Model 20 as pictured enables 36" machine to cut material 22" wide at an angle up to 45°—with simple, quick adjustment. (lower unit shows angular adjustment) Ball bearing wheels turning with the blade give friction-free support! Wheels are interchangeable for balanced wear and long life. Write for circulars and prices!



PADDOCK TOOL CO.
Guide Makers Since 1920
1418 Walnut St. Kansas City 6, Mo.

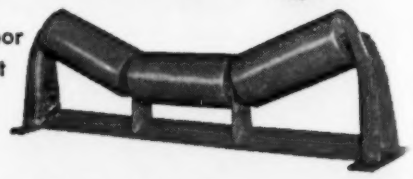
Paddock BALL-BEARING BAND SAW GUIDES



Out of luck since Transall took over

Transall Belt Conveyor Idlers **Pre-**Lubricated

No Lubrication Labor
No Lubricant Cost



TRANSALL INC.
Manufacturers of a complete line of Belt Conveyor Equipment
119 North 11th St. Birmingham 4, Ala.

For more details circle NED-1058 on enclosed inquiry slip

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Sec. 34.9 P. L. & R.
Cleveland, Ohio

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Penton Building
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COMPANY .....

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CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approximate Number of Employees in Plant .....

Also send NEW EQUIPMENT DIGEST free to the following men in our company:

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NAME ..... TITLE .....

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Have You Filled In Your Name and Address?

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To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

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901	951	1001	1051	1101	1151	1201	1251	1301	1351	1401	1451	1501	1551	1601	1651	1701	1751	1801	1851	1901
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945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595	1645	1695	1745	1795	1845	1895	1945
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949	999	1049	1099	1149	1199	1249	1299	1349	1399	1449	1499	1549	1599	1649	1699	1749	1799	1849	1899	1949

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22

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees .....

ADDRESS .....

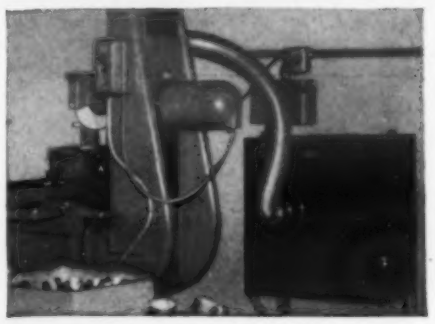
CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

STOP DUSTS



INSTANTLY *with* DUSTKOP

Available from stock of 22 standard models
300 cfm to 10,000 cfm

for: Surface Grinders, Tool and Cutter Grinders; Polishers and Buffers; Abrasive Belts and Discs; Woodworking and Plastic Industry Equipment . . . DUSTKOPS collect almost all kinds of industrial dusts.

Ask for Catalog 605-2. Describe dust problem for recommendation by return mail—no obligation.

AGET-DETROIT CO.
201 Main St. Ann Arbor, Michigan

For more details circle NED-1059 on enclosed inquiry slip

Play SAFE

and, at the same time,
REDUCE Insurance Rates

Get THIS FREE FOLDER

it tells you about the
CHICAGO Watchclock

and how it watches the watchman! A tamperproof system that keeps a constant check on watchmen's activities. In use all over the world . . . So effective that users earn reduced insurance rates! The CHICAGO WATCHCLOCK system thereby quickly pays for itself while it gives you protection against fire, theft and sabotage.

FILL IN and MAIL NOW

CHICAGO WATCHCLOCK
Div. Great Lakes Industries, Inc.
1522 S. Wabash Ave., Chicago 5

"The first—and still the first!"

Gentlemen: Send us your folder of details, and prices on the various CHICAGO Watchclock models.

My name.....

Firm name.....

Street..... City..... State.....

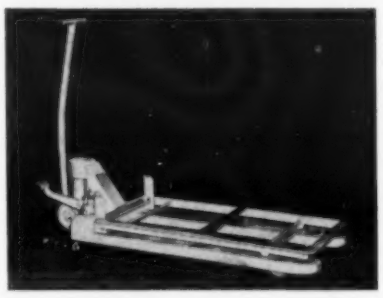
For more details circle NED-1060 on enclosed inquiry slip

PORTABLE DUPLICATOR
prints up to 8½ x 11-in. copies

Employing spirit process, Master portable duplicator weighs only 12 lb and is equipped with a case so that it can be carried easily. Material ranging in size from post card to 8½ x 11-in. sheet can be printed in as many as five colors at a time. As machine is operated, impression paper is moistened by rollers with clear spirit which picks up carbon from master. Master can be prepared by typing, or writing or drawing with a ball-point pen. List price complete with supplies is $32.50. Made by **Master Addresser Co.**, 6500E W. Lake St., Minneapolis 16, Minn.

For more details circle NED-1061 on enclosed inquiry slip

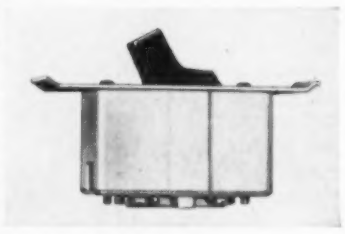
SKID ADAPTER
converts pallet trucks for skid use



Conventional hand pallet trucks can lift and handle skid platforms with a skid adapter which is hinged superstructure for installation on the truck. To handle pallets with boards at both top and bottom, truck with lowered height of 3¼ in. is required, while skids have no bottom boards and require use of platform truck having a 6-in. or more lowered height. With hinged superstructure in lowered position, pallet truck lowered height is increased to allow handling of skids. It is raised out of way to restore pallet handling ability. Made by **Raymond Corp.**, 41-85 Madison St., Greene, N. Y.

For more details circle NED-1062 on enclosed inquiry slip

DOUBLE-POLE SWITCH
withstands high temperatures



Mechanism of this double-pole appliance switch, capable of withstanding intermittent temperatures up to 600° F and sustained temperatures up to 450° F, is enclosed in molded box of electrical porcelain. Box dimensions are 1-13/16 x 1-3/16 x 1¼ in. Phenolic molded, heat resistant material is used for breaker bars and porcelain barrier separates terminals. Phenolic barrier prevents arcing. Special face plates for mounting can be furnished. Switch bears Underwriters' Laboratories approval. Made by **John I. Paulding, Inc.**, 100 Kings Highway, New Bedford, Mass.

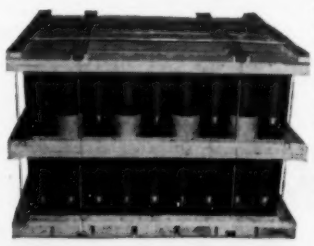
For more details circle NED-1063 on enclosed inquiry slip

Can we help you with defense orders?

GERRARD ROUND STEEL STRAPPING
complies with packaging specifications JAN-P-106A, JAN-P-107 and JAN-P-108

Take advantage of Gerrard's years of experience in packing and packaging when you face the problem of shipping defense orders. Gerrard Round Steel Strapping complies fully with the joint Army-Navy specifications JAN-P-106A, JAN-P-107 and JAN-P-108 for overseas packing.

A Gerrard engineer can help you with your packaging problems. He can assist you to plan boxes and cartons that conform to specifications, and at the same time help you to make the best use of the steel strapping available. Where practicable, our engineer will demonstrate the advantages of Gerrard Strapping for bundling, palletizing, or securing packages with the Diagonal Tie.



These shells were easily and securely tied to a pallet with Gerrard Round Steel Strapping.

Orders for defense requirements receive preference in delivery according to current regulations. Strapping available for non-defense orders is being equitably distributed among our customers. Phone, write or wire for further information.

USS
Gerrard Steel Strapping Division
United States Steel Company
4717 South Richmond St., Chicago 32, Illinois

UNITED STATES STEEL

For more details circle NED-1064 on enclosed inquiry slip

Reported by Users of
STANDARD PNEUMATIC TUBE SYSTEMS

Safe—swift delivery by "AIR" of messages . . . money . . . merchandise!

Savings as high as $10,000 in 9 months' time are reported by users of Standard Pneumatic Tube Systems — filling orders, moving merchandise, money, messages, records, between departments. Reduce messenger and telephone service. Can be installed for a wide range of needs in stores, warehouses, manufacturing plants, offices. Write for Bulletin No. 11 and complete information — address Dept. NED22.

STANDARD CONVEYOR CO.
North St. Paul 9, Minn.

Write for Bulletin No. 11 — Standard Pneumatic Tube Systems. Address Dept. NED22.

Standard GRAVITY & POWER CONVEYORS

For more details circle NED-1065 on enclosed inquiry slip

Black & Decker ¼" Heavy-Duty HOLGUN* only $44.00

NOW . . . INDUSTRY'S MOST FAMOUS ELECTRIC DRILL IS FINER THAN EVER! This brand-new Black & Decker HOLGUN has *25% more power* with a new B&D-built motor that *can't be stalled* at rated capacity—a new handle shaped for plenty of finger room—husky, high-quality parts to make it really *heavy-duty*—light weight (3¼ lbs.) to cut fatigue—compactness that's unmatched for close-quarter drilling. See your nearby B&D Distributor for a demonstration of features that save you money, muscle and man-hours! WRITE FOR FREE LITERATURE TO: The Black & Decker Mfg. Co., 662 Pennsylvania Ave., Towson 4, Md.

* Trade Mark Reg. U. S. Pat. Off.

LEADING DISTRIBUTORS EVERYWHERE SELL
Black & Decker PORTABLE ELECTRIC TOOLS

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"Let me send you the new circular on Trabon Swivels"

Trabon Steel Swivels
Sizes ⅛" to 1" pipe
Pressure or Vacuum Service

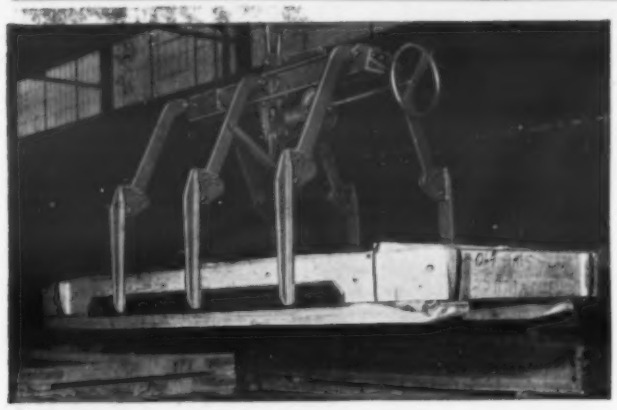
THOUSANDS IN USE . . .

Write for your free copy of Bulletin No. 424

Trabon
OIL AND GREASE SYSTEMS

TRABON ENGINEERING CORP.
1814 East 40th Street
Cleveland 3, Ohio

For more details circle NED-1067 on enclosed inquiry slip



HERE'S SHEET HANDLING ECONOMY

No better demonstration of the efficiency, flexibility and economy of C-F Lifters can be made than to watch this 5 ton C-F Lifter handle all sheet steel movement in this busy Chicago district warehouse.

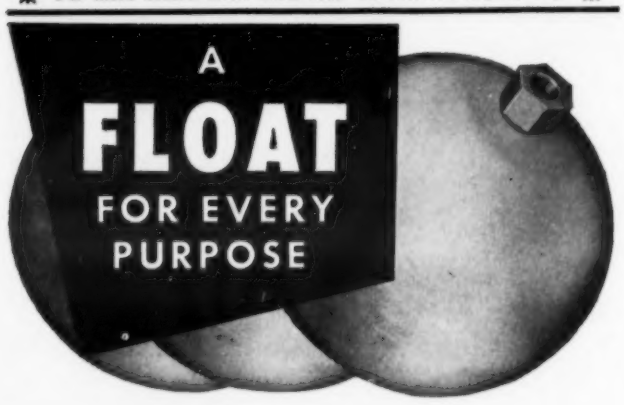
C-F Lifters have quick opening jaws with infinite opening and closing adjustments, permitting them to handle a wide variety of sheet widths—wide bearing angles that safely lift sheets without crimping edges—end control to permit close quarter operation—positive jaw controlling mechanism that holds the jaws open in any position—these and many other exclusive features make C-F Lifters a good investment in materials handling equipment.

C-F Lifters are made in manual and motor operated models in sizes to handle from 2 to 60 tons in standard and semi-special designs.

Write for the Bulletin "C-F Lifters"—it describes the advantages and economies C-F Lifters can bring to your sheet handling jobs.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

For more details circle NED-1068 on enclosed inquiry slip



No matter what your float needs are, you can meet them from Chicago Float's complete line. Where pressure and temperature requirements are critical you can satisfy them with long wearing, dependable stainless steel floats which are built to withstand pressures to 1000 lbs. and temperatures to 800° F.

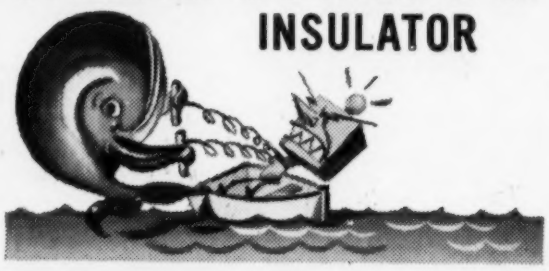
A complete line of standard seamless copper floats is available for low temperature and pressure services. In addition, you can get floats in brass, monel, steel or nickel for certain specific requirements. A wide variety of standard shapes, sizes and spud connections are offered. Special floats made to order.

SEND FOR YOUR COPY OF COMPLETE CATALOG CONTAINING ALL VITAL INFORMATION ON FLOATS

CHICAGO FLOAT WORKS, INC.
2342 South Western Avenue • Chicago 8, Illinois

For more details circle NED-1069 on enclosed inquiry slip

SYNTHANE is a Whale of an INSULATOR



Synthane laminated plastics have a *combination* of superior electrical qualities that may make them just the materials you've been seeking to make your product better.

One advantage is excellent electrical insulating ability. Others are high dielectric strength, low dielectric constant and low power factor. Together with Synthane's light weight, ease of machining and good mechanical and chemical characteristics, they make Synthane a valuable material for many applications in almost every industry.

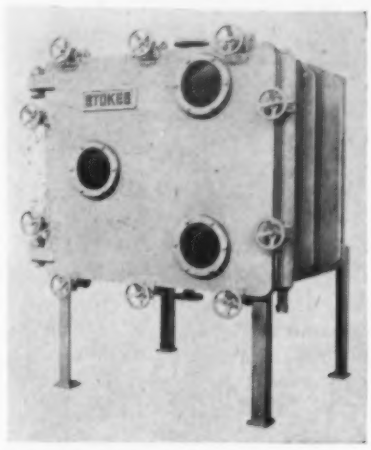
If your present materials are in any way unsatisfactory and your quality standards are high it may pay you well to find out more about Synthane. For your copy of the Synthane catalog, clip and mail the coupon today.

TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS
SYNTHANE
MOLDED - LAMINATED
MOLDED-MACERATED

SYNTHANE CORPORATION
North East River Road, Oaks, Pa.
Please send me a copy of the complete Synthane catalog.
Name_____
Firm_____
Address_____
City_____ State_____

For more details circle NED-1070 on enclosed inquiry slip

VACUUM SHELF DRYERS
improved models have steel doors, larger sight ports and spotlight



Construction changes in Stokes vacuum shelf dryers assure complete vacuum under absolute pressure drying procedures in the low micron range. Dryer shelves with internal baffles are arranged to provide uniform heat throughout entire shelf area. Jacketed construction of top surface of dryer prevents condensation of vapors passing toward vacuum connection. Lower section is fitted with drain gutter and outlet to allow cleaning unit without spillage.

Improvements include steel instead of cast iron doors and larger sight glasses. B chambers have two 6-in. glasses while H and J units have three 9-in. glasses instead of usual 4½-in. ports. Doors are stronger, free from pitholes and leaks, easy to modify, lighter in weight and easy to coat with special materials. Swivel spotlight attached to dryer door allows close observation of material during drying process. Swinging eyebolt clamps and handwheels provide easy sealing, and specially extruded gaskets fitted in grooves of doors assure positive seal. Dryers are available in seven chamber sizes with shelf spacing to suit specific requirements. Made by **F. J. Stokes Machine Co.**, 5900 Tabor Rd., Philadelphia 20, Pa.

For more details circle NED-1071 on enclosed inquiry slip

CUTTER HEAD GRINDER
design allows grinding at any angle

Incorporation of G-11 cutter head setting gage in model 106-A universal cutter grinder makes it possible for inexperienced operator to get satisfactory grinds with first use. Gage makes possible considerable savings in setup time. Accuracy of gage requires less of knives to be ground away on each sharpening. The 360-degree adjustment on turret type motor base assembly permits any angle grind to be made by single adjustment. Cutter heads up to 12-in. diameter can be accommodated. Attachment G-11a grinds molder or profiler heads of slip-on type. Other attachments include one for grinding thick and thin straight knives up to 20 in. long and G-10 for grinding heads on cartridge spindle units. Made by **Dependable Machine Co.**, 200 High Point Rd., Greensboro, N. C.

For more details circle NED-1072 on enclosed inquiry slip

QUICKLY BEND PIPE OR CONDUIT EXACTLY AS YOU NEED IT!

Make tailor-made bends *right on the job* with a GREENLEE Hydraulic Pipe Bender. One-man operated . . . in but a few minutes produces smooth, accurate bends in pipe up to 5", rigid and thin-wall conduit, tubing. Compact, easy to set up and operate. Great time-saver for making piping and electrical installations either on machines being produced or for your plant maintenance and construction.

WRITE FOR FACTS, get complete information on this and other GREENLEE time-saving tools. Greenlee Tool Co., 1942 Herbert Ave., Rockford, Illinois

For more details circle NED-1073 on enclosed inquiry slip

Made to order for heavy packages...

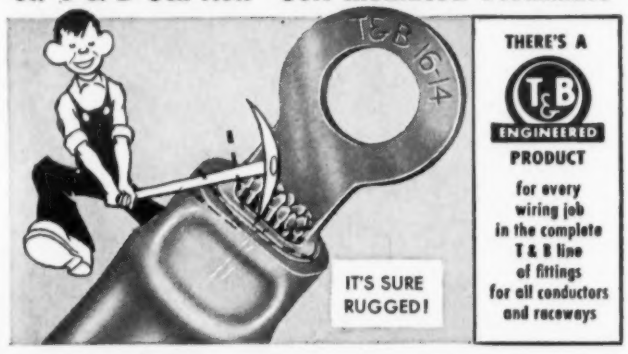
Conveying heavy packages between manufacturing departments and to and from the warehouse can be mighty expensive until you put them on conveyors. If you have some heavy packages to move — let's talk it over—

ALVEY *Engineered...* PACKAGE CONVEYING

ALVEY CONVEYOR MFG. CO.
P. O. BOX 3031
St. Louis 24, Missouri Sales Offices in Principal Cities

For more details circle NED-1074 on enclosed inquiry slip

INSULATION STAYS PUT
on T & B Sta-Kon® Self-Insulated Terminals*



Nylon insulation on these new T & B Sta-Kon Self-Insulated Terminals is anchored by flaring of terminal barrel — and staking operation keys it in place to *stay*.

These new components end the risk of shorts between closely-mounted terminals. Insulation prevents metal-to-metal contact — withstands attack by gasoline, naphtha, hydraulic fluids. Shipped in one piece, assembled in one operation — with SHURE-STAKE Hand or Power Tools.

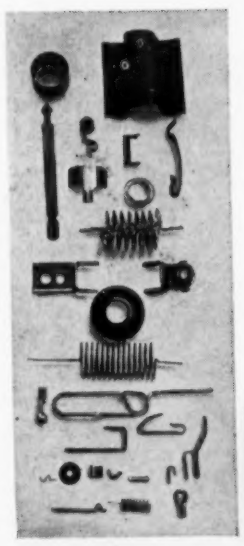
Engineered Right—Distributed Right. Sta-Kon Self-Insulated Terminals are typical of all T & B quality fittings designed for lowest installed costs. Furnished 100% through T & B distributors under the T & B Plan.

*Patent Pending

THE THOMAS & BETTS CO.
INCORPORATED
24 BUTLER STREET, ELIZABETH 1, NEW JERSEY
Manufacturers of Electrical Fittings since 1898
Originators of self-insulated solderless terminals in 1935

For more details circle NED-1075 on enclosed inquiry slip

Priced Right!
WIRE FORMS
& *Metal Stampings*



High-speed, quality production with custom-made precision. Wire formed to any shape for every need.

IMMEDIATE CAPACITY FOR DEFENSE SUB-CONTRACTS

STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft.
.0015 to .125 diameter

WIRE FORMS
.0015 to .080 diameter

SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide

Specializing in Production of Parts for Electronic and Cathode Ray Tubes

Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
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NEWARK 2, N. J.

For more details circle NED-1076 on enclosed inquiry slip

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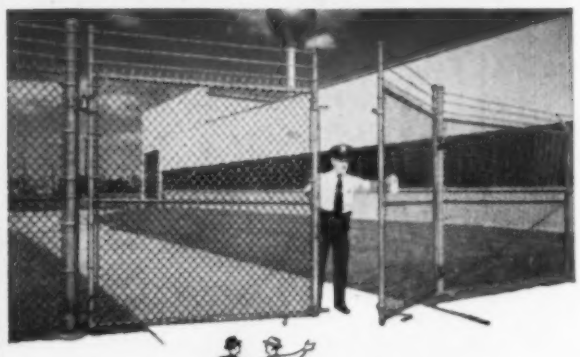
• AMERICA'S FIRST WIRE FENCE •



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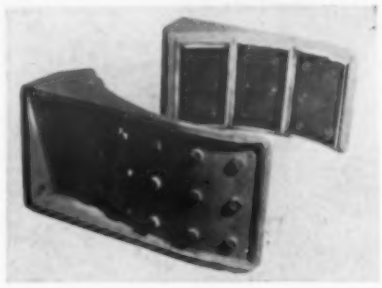
Write to PAGE FENCE ASSOCIATION *in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.*

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

▲ For more details circle **NED-1077** on enclosed inquiry slip ▲

DRUM HANDLING ATTACHMENTS fit industrial power lift trucks



Two and four drum models of handling arms are available for attachment to model 20 and 40 industrial lift trucks, respectively, and have rated capacities of 1990 lb and 2800 lb. Arms are used in conjunction with the Hyster load grab attachment and feature steel-backed replaceable rubber pads. Arms are fully interchangeable with previous models. Made by **Hyster Co.**, 2906 N. E. Clackamas St., Portland 8, Oreg.

▲ For more details circle **NED-1080** on enclosed inquiry slip ▲

PURGE METER controls liquid or gas flow rates

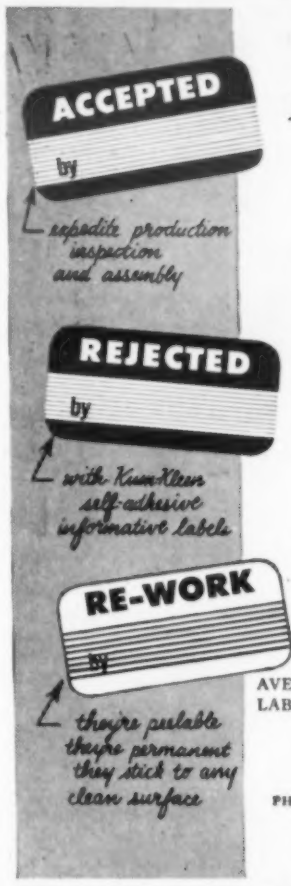
Predetermined liquid or gas flow rates can be maintained or controlled regardless of upstream or downstream pressure variations through use of Brooks Mite purge meter coupled with Conoflow H-11 constant differential relay. Meter component is bored from acrylic plastic block. Available in four tube sizes, assembly has range of 0.01 to 54 gph of water and 0.2 to 216 cfh of air. Flow rate is visually indicated by position of spherical float in metering tube. Flow adjustment is made with Flo-Mite needle control valve. Made by **Brooks Rotameter Co.**, Dept. OP, Box 432, Lansdale, Pa.

▲ For more details circle **NED-1081** on enclosed inquiry slip ▲

CERAMIC CAPACITOR thin unit has high strength

Measuring 0.156-in. maximum thickness and 0.594-in. maximum diameter, J-Cap thin disk ceramic capacitor combines completely fabricated high K ceramic body and new coating material to give it high strength. Unit meets requirements of RTMA standards. Ratings are: 0.005-mfd; working voltage of 500 v dc; test voltage of 1300 v dc; leakage resistance, over 7500 megohms; and power factor, less than 2.5 per cent. Made by **Jeffers Electronics, Inc.**, Dept. ED, Du Bois, Pa.

▲ For more details circle **NED-1082** on enclosed inquiry slip ▲



new, removable Kum-Kleen inspection stickers

Hundreds of industrial plants have found these Kum-Kleen *Removable* Inspection Stickers are far faster, safer and more efficient than string tags, chalk marks, grease pencil, or gummed labels. These pre sure-sensitive Kum-Kleen stickers are quickly applied *without moistening*, and they stick-and-stay-stuck to all clean, smooth surfaces, never curl or pop off, yet easily peel off when their job is done. In stock for immediate delivery or available printed to your specifications.

write for samples ADDRESS DEPT. NED-2

AVERY ADHESIVE LABEL CORPORATION — Kum-Kleen

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CLEVELAND: 2123 East 9th Street
PHILADELPHIA: Commercial Trust Building
CHICAGO: 608 South Dearborn Street
CINCINNATI: 626 Broadway Street
MONROVIA, California
Representatives In All Principal Cities

▲ For more details circle **NED-1084** on enclosed inquiry slip ▲

You get a *Complete Package* with a

RIVETT Power Unit!

Rivett offers the Series 9100 Power Unit as the ideal source of power for your hydraulic circuit. The unit is equipped with pump, relief valve, oil filter, pressure gauge, and all equipment necessary to furnish a steady flow of oil at continuous working pressures up to 1000 P.S.I. Reservoir is available in 5 tank sizes, with pump capacities from .4 G.P.M. to 40 G.P.M. Motor mounting may be arranged for any standard frame. Series 9200 with double pumps are supplied for two separate circuits of different pressures.

Write for Catalog showing specifications and description of Rivett Hydraulic Power Units.

RIVETT LATHE & GRINDER INC.
Brighton 35, Boston, Mass., Department NED-2.

▲ For more details circle **NED-1078** on enclosed inquiry slip ▲

DRILL CONCRETE
70% Faster with
TILDEN ROTARY KONKRETE KORE DRILLS

Why? *Only Tilden has this patented slot . . . expels cuttings automatically!*

- Diameters 3/16" to 4" in stock
- Diameters above 4" made to order
- Interchangeable shanks up to 5 feet
- ½" to 1" drills cut up to 6" per min.
- Drills 200" before resharpening (including embedded steel, glass, rock)
- Free factory sharpening service
- Use with any electric or air drill
- Quiet operation - no hammer

Write for FREE CATALOG today!

Tilden Rotary Konkrete Kore Drills are standard equipment with utilities, municipalities and thousands of contractors. Used by the U. S. Navy, Air Force and C. A. A.

TILDEN TOOL MANUFACTURING COMPANY
209 Los Molinos • San Clemente, Calif.
BRANCH OFFICE
1144 W. Washington Blvd • Chicago 7, Ill.

SOLD BY BETTER SUPPLY HOUSES EVERYWHERE

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Let WATLOW make things HOT FOR YOU !

WATLOW Electric STRIP HEATERS

For simple warm-up — or sustained high heat—there's a Watlow Strip Unit of the size, shape, voltage or wattage "tailored" to your specific needs.

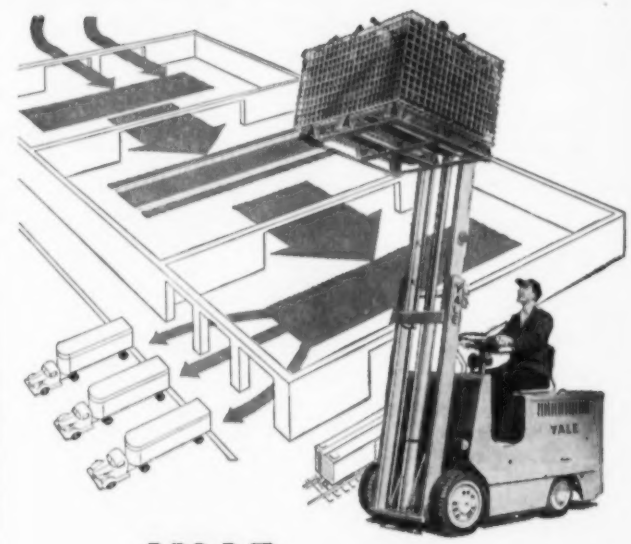
Custom-Designed Heat Units
If you have a special heat problem, send us a blueprint or pencil sketch of your job. Our engineering dept. will send you prompt recommendations and quotations, without obligation.

FREE CATALOG of strip, band, cartridge, immersion heaters.

SPECIALISTS IN ELECTRIC HEATING UNITS

WATLOW ELECTRIC MANUFACTURING COMPANY
1314 N. 23d St. St. Louis 6, Mo.

▲ For more details circle **NED-1083** on enclosed inquiry slip ▲



YALE *electric trucks travel this route longer —for less*

YOU CAN SAVE up to 75% of your production, receiving, shipping and storage handling costs with dependable, longer-lasting YALE Electric Trucks. Discover now the *extra* savings YALE Electric Trucks bring you—in operating, maintenance and replacement costs. Mail the coupon today.

THESE EXCLUSIVE YALE FEATURES KEEP TRUCK OVERHEAD DOWN

- Exclusive Hypoid Gears give greater drive power, longer drive life
- Exclusive Involute Spline Drive Shaft, built for continuous resistance to wear fatigue, outlasts all others
- Special Rolled Lift Channels with lifetime sealed ball bearing channel rollers won't wear, won't spread—need never be replaced
- Exclusive YALE design makes every part accessible for fast, cost-saving "minute-maintenance"

YALE & TOWNE

The Yale & Towne Manufacturing Co., Philadelphia 15, Pa.
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I want the most from materials handling savings.
☐ Please send free detailed literature on the YALE ELECTRIC TRUCK
☐ Please have your local Representative call on me
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NAME _____ TITLE _____
STREET _____ CITY _____ STATE _____
In Canada write: The Yale & Towne Mfg. Co., St. Catharines, Ont.

YALE GAS AND ELECTRIC TRUCKS • YALE WORKSAVERS
YALE HAND TRUCKS • YALE HAND AND ELECTRIC HOISTS

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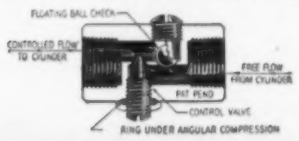
FLOW CONTROL VALVE

for Cylinder Speed Adjustments over a WIDE RANGE IN AIR OR HYDRAULIC USE

The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check, as illustrated at left. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—⅛", ¼", ⅜", ½", and ¾".

Attractive prices — immediate delivery. Write for illustrated circular and price list.



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Pneu-Trol Devices, Inc.
1432 N. Keating Ave., Chicago, Ill.

For more details circle **NED-1086** on enclosed inquiry slip

WRIGHT Again!

now...new FRAME "B" Speedway

● Rugged construction, yet light and portable, the new **Wright Frame "B" Speedway Electric Hoists** are designed for service in practically any location. Ideally balanced for hook suspension. ● Ball and roller bearings, alloy steel gears, swaged cable fittings, heavy duty motor, silver contact controls are some of the features which assure long life and low maintenance cost. Capacities from 250 lbs. to 1000 lbs.

Write for literature.

ACCO York, Pa., Chicago, Denver, Detroit, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

WRIGHT HOIST DIVISION
AMERICAN CHAIN & CABLE

TRADE MARK *In Business for Your Safety*

For more details circle **NED-1087** on enclosed inquiry slip

WHAT NO BILLS!

Yes, no bills for Towels and Washroom Maintenance

With the perfected, automatic NATIONAL HAND DRYER —dries hands completely dry in 20 seconds!

Eliminates the constantly mounting cost of paper towels or towel service—no storage problem, no filling of cabinets, no removal, cleaning and disposal time or attention. No time when clean, sanitary drying service is not available.

Do you really know how much your wash room service is costing you?

One fast-acting, tamper-proof NATIONAL HAND DRYER serves 1½ to 2 wash basins, pays for its cost from actual cash outlays in 12 to 18 months, gives quick, soothing drying service at the touch of a button.

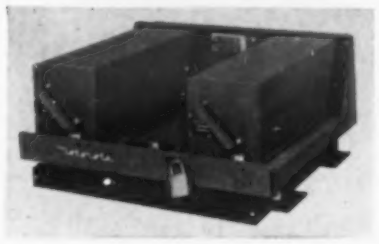
Let us show you an actual example of continuous cost savings with NATIONAL DRYERS over towels. Fill in the coupon and attach to your company letterhead for quick response.

National Dryer Sales Corporation, Dept. NE-2, 616 West Adams St., Chicago 6, Ill.
Without obligation, send complete information on National Hand Dryers and example of cost savings.
( ) Also send information on National Hair Dryers.
Name .....
Address .....
City ..... Zone ..... State .....

For more details circle **NED-1088** on enclosed inquiry slip

RAILROAD RADIO SYSTEM

permits multiway communications between dispatcher and trains



Main Line railroad radio equipment makes it possible to maintain multiway communications between a division dispatcher and one or more radio-equipped trains or other railroad vehicles in the division area. System includes complete remote control facilities of up to six wayside transmittting-receiving stations along railroad line for operation from dispatcher's office.

Signals are transmitted over telephone line from dispatcher to station nearest the train to which signals are directed, from where they are transmitted by two-way radio. Train transmits to nearest station, from which the signal automatically is sent by telephone to the dispatcher. Microwave, carrier or other long-distance communications means could be used as well as telephone lines.

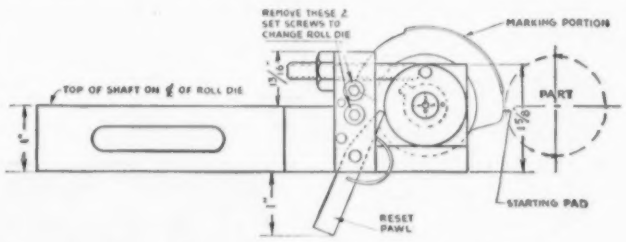
Illustrated compression line amplifier which assures near-constant signal level and selector switching unit which provides for five on-off control functions over same telephone pair used for voice communications are mounted on horizontal rack designed expressly for railroad use. Made by **Motorola Inc.**, Communications & Electronics Div., 4545 W. Augusta Blvd., Chicago 51, Ill.

For more details circle **NED-1089** on enclosed inquiry slip

ROLL MARKING DIES

inclined plane starting pad assures uniform impressions

Standard inclined plane (or cam) starting pad incorporated on model 500-c automatic roll marker dies assures uniform depth of impression on parts and aids operator



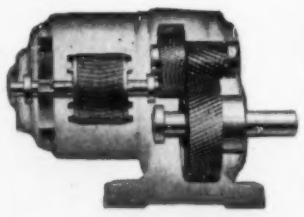
in tooling set-up since special cams or feeds are not required. Starting pad contacts part to be marked during last 3/16-in. forward feed of conventional screw machine cam.

Further improvements include center of roll die positioned in line with top of offset shank for easy locating of holder during setup, simplified ratchet pawl mechanism which trips roll die to reset it during last ⅛ to 3/16-in. of stroke, and solid instead of split yoke construction. Dies are replaced by removing only two Allen-head set screws. Elimination of type face drag on marked surface, ability to use interchangeable type or solid roll dies and provision for full 360 degrees starting point adjustment are other features. Made by **New Method Steel Stamps, Inc.**, 143 Jos. Campau St., Detroit 7, Mich.

For more details circle **NED-1090** on enclosed inquiry slip

MACHINERY MFR. CUTS PRODUCTION TIME 50%

Using Slo-Speeds on cold metal processing equipment we manufacture, we show savings of approximately 50% in construction costs, reports Mr. George H. Slagle, owner, Slagle Beryllium Co., Havertown, Pa. ...and our customers gain an important economic advantage through lower equipment costs.



70 ILLUSTRATIONS showing how Sterling Electric Power Drives reduce production costs. Write for Bulletin No. D-128.

STERLING SLO-SPEED OUTSTANDING FEATURES:

Simplified gear system—balanced design—compact—rugged — highly efficient — abundant lubrication—low output shaft—positive oil seals — Herringbone Rotor — protected — streamlined — direct through ventilation — quiet operation — AGMA speeds — extremely long life — every unit will operate in any position.

STERLING ELECTRIC MOTORS

Plants: New York City 51; Van Wert, Ohio; Los Angeles 22; Hamilton, Canada; Santiago, Chile. • Offices and distributors in all principal cities.

For more details circle **NED-1091** on enclosed inquiry slip

FOR LOWER COST Gas Heating select Janitrol UNIT HEATERS

LOWER INITIAL COST OPERATING COST MAINTENANCE COST

30 Sizes—Types

Janitrol offers the most complete line of Unit Heaters to meet individual requirements.

If you are planning on modernizing your heating—need supplementary heat for plant enlargement—if you are building or leasing an industrial building—you can save on equipment, operating and maintenance costs with Janitrol Unit Heaters. Remember, you get more worthwhile design features with Janitrol, plus proven performance.

Write today for complete specifications.

SURFACE COMBUSTION CORPORATION • DEPT. G, TOLEDO, OHIO

For more details circle **NED-1092** on enclosed inquiry slip

step up production with STOW flexible shaft MACHINES

Stow STREAMLINER N-40

3-SPEED JIFFY SJ-38

These dependable STOW FLEXIBLE SHAFT MACHINES save production time . . . speed up output . . . help lower production costs. Variable Speed Models shown are easily portable . . . cut down operator fatigue and increase on the job efficiency!

Constant Speed Models available. Also complete line of accessories designed to increase the utility of STOW Flexible Shaft Machines!

WRITE TODAY for your free copy of CATALOG 51

STOW MANUFACTURING CO.
26 Shear St. Binghamton, N. Y.

For more details circle **NED-1093** on enclosed inquiry slip

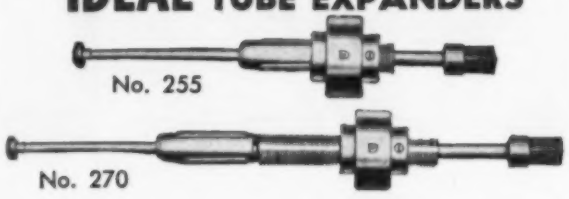
Sold & Serviced in Principal Cities Throughout U.S.A.

VICTOR J. KRIEG, Inc.
Sole U.S. Representative for Scintilla, Ltd. Switzerland
51 West 52nd St., New York 19, N.Y.
ELdorado 5-4030
Some Sales Territories Available

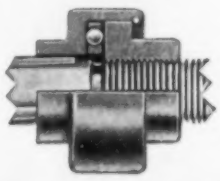
For more details circle **NED-1094** on enclosed inquiry slip

You Get Faster and Smoother Tube Rolling with America's Finest

IDEAL TUBE EXPANDERS



Ball Bearing-Adjustable Thrust Collar



Loose collar remains stationary against tube end or sheet, reducing friction to a minimum. Prevents pulling of tube and will not mar sheet—ECONOMICAL for production work.

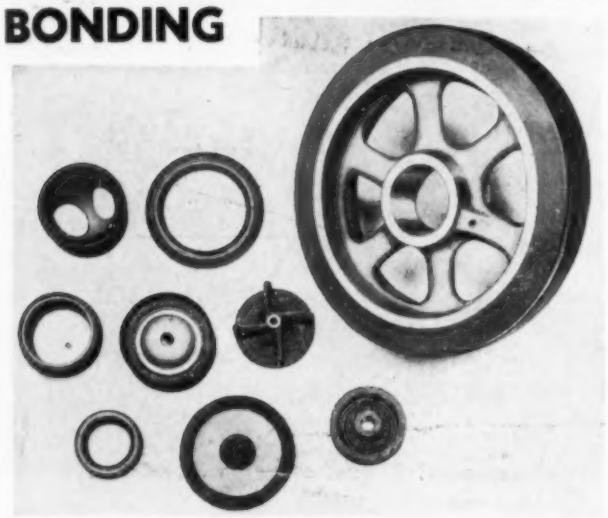
Expanders may be adapted for use with Automatic Torque Controlled Operating Units, for precision tube rolling.

For Complete Details see Your Dealer, or Write Today

THE GUSTAV WIEDEKE COMPANY
DAYTON 1, OHIO

For more details circle NED-1095 on enclosed inquiry slip

RUBBER-TO-METAL BONDING



We bond rubber to metal parts in molds to provide the designer with an efficient method of simplifying design and cutting costs in applications requiring shock absorption, sound abatement, electrical insulation or conductivity, corrosion-resistance, protection against abrasion, etc. Send specifications and prints, or request our engineers' recommendations.

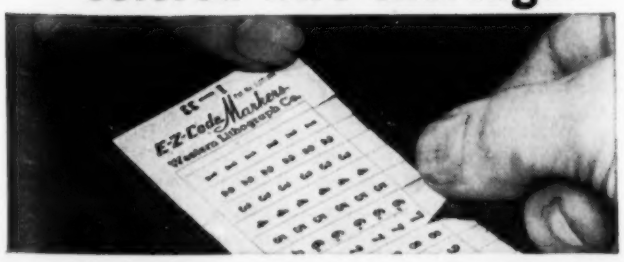
Acushnet PROCESS COMPANY
NEW BEDFORD, MASS., U. S. A.

Address all correspondence to 782 Belleville Avenue

For more details circle NED-1096 on enclosed inquiry slip

here's your ANSWER to the

colored wire shortage!



E-Z CODE WIRE MARKERS simplify the assembly of wiring circuits by number or standard NEMA color code—answer problems created by a colored wire shortage. They maintain accuracy...minimize rejections...simplify inspection...and get the most from new, inexperienced employees, even when assigned to the most complicated wiring projects. E-Z Codes, with the exclusive Speed-Tab, are faster to remove from carrying card, quicker to apply *(without moistening)* and adhere permanently to wire and cable, even when pulled through conduit. They are unaffected by heat and humidity. E-Z Codes are the efficient, low-cost answer to your colored wire shortage problem.

WRITE FOR SAMPLES TODAY!

Western Lithograph Co.
600 East Second Street
Los Angeles 54, Calif., Dept. NED-2
Box 3804
St. Louis 22, Mo.

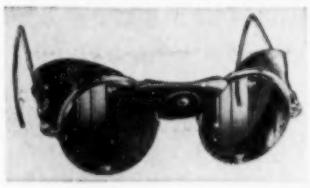
For more details circle NED-1097 on enclosed inquiry slip

ELECTRIC FANFOLD TYPEWRITER
speeds multicopy record production

Ten key keyset decimal tabulation is feature of this electric Fanfold writing machine and facilitates rapid positioning of carriage to predetermined decimal locations to speed billing, invoicing, ordering, requisitioning and other operations. Electric operation insures uniform type impressions. Ten pressure control settings automatically give any desired number of carbons. Electric intermediate and full carriage return, palm tabulator, adjustable form measuring gage for accurate form removal, pivoting transparent form cutting knife and choice of floating sheet or roll carbon paper are features. Continuous forms and automatic carbon retraction afford high speed production of multiple typed records. Made by **Underwood Corp.**, Dept. NED, 1 Park Ave., New York 16, N. Y.

For more details circle NED-1098 on enclosed inquiry slip

WELDER'S GOGGLE
wearer comfort is assured



Featuring removable and adjustable leather side shields, series 3081A welder's goggle can be adjusted for perfect fit by loosening endpiece screws. Side shields can be taken off for cleaning sterilizing or replacement. Shields exclude heat, harmful light and flying particles. Cylinder and bridge are leather covered. Made by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

For more details circle NED-1099 on enclosed inquiry slip

PALLET TRUCKS
hand lift models also handle skids

Dual-purpose superstructure on line of hand lift pallet trucks enables them to handle 7 and 12-in. skids as well as single or double-faced pallets. When superstructure is in raised position, it is clamped to provide backrest for pallet load on truck. When lowered (see photo), it is adjustable to either 7 or 12-in. heights by cam and slot arrangement. Truck is available with either mechanical or hydraulic lifts. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

For more details circle NED-1100 on enclosed inquiry slip

NEW and MOST POWERFUL

ROTARY ELECTRIC IMPACTOOL

SIZE 34-U for 1¼" bolts

Weight—32½ lbs.
Height—10 3/16"
1" square driver
110-volt AC-DC

— *makes the toughest jobs easy.*
— *sold by leading automotive jobbers and distributors.*

Ingersoll-Rand
11 Broadway, New York 4, N. Y.

623-18

For more details circle NED-1101 on enclosed inquiry slip

REMOVE STUBBORN GREASE AND DIRT FROM METAL PARTS — EASIER, FASTER, MORE ECONOMICALLY WITH . . .

Photo shows 20 mm. guns after degreasing of Cosmoline, prior to modification operations.

ENGINEERED SERVICE PHILLIPS

VAPOR DEGREASERS

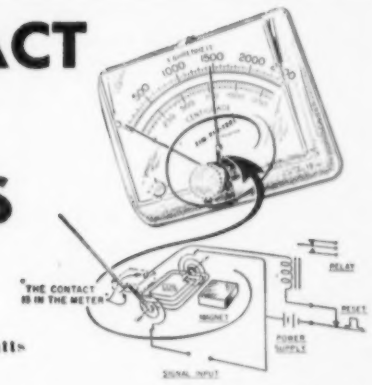
SEND FOR YOUR FREE COPY OF NEW ILLUSTRATED DEGREASER BULLETIN!

THE most heavily greased up parts will come clean easier and faster in a Phillips degreaser. High vapor temperature (250.2° F.) not only causes more dissolved grease to run off the metal, but makes for faster degreasing too. Wherever you have parts to clean, large or small, before plating, painting, rustproofing, service and repairwork, etc., you can do it better, faster and more economically with a Phillips degreaser. There's a standard model to meet your needs. Check with Phillips today.

Phillips MANUFACTURING COMPANY
3463 Touhy Ave. • Chicago 45, Illinois
Vapor Degreasers • Solvents • Parts Washers

For more details circle NED-1102 on enclosed inquiry slip

CONTACT METER RELAYS



sensitive to

.000,000,002 watts

Simplytrol Contact Meter-Relays make Automatic Control economical for many uses where it was impractical before.

Sensitive to changes of less than 1% of the scale range, these precision relays may be used in any circuit where an ordinary meter might be used. They have a full 90° of scale arc. The contact point is fully adjustable from the front and it may be set to any point on the scale.

Simplytrols exclusive Micro-Contacts assure instantaneous circuit closing with high contact pressure and a clean, positive break. Uses include Automatic Control of Temperature, Speed, etc., Over- & Under-Control of Voltage, Current, etc., Automatic Inspection.

Simplytrols are available in many ranges from 0-20 Microamperes and up, AC and DC, and in Pyrometer ranges to 3000°F. Prices run from $25.90 to $85.00. Send for Bulletin CMR-9 with suggested circuits and technical description.

Assembly Products, Inc.
Chagrin Falls 12, Ohio, Phone CH 7-7374

For more details circle NED-1103 on enclosed inquiry slip

you can cut carrying costs!

This new booklet on Conveyor Chains and Attachments is packed with photographs, sketches and descriptions of how chain conveyors can cut your materials handling costs. Designed as a "thought provoker" for anyone concerned with materials movement, it covers all major types of chain conveyors, handling everything from bulk material to oil drums to tiny lenses.

We feel sure you'll find this book both interesting and valuable. Just mail the coupon.

CHAIN BELT REX COMPANY

Chain Belt Company
1686 W. Bruce Street
Milwaukee 4, Wis.

50-133

Gentlemen: Please send me Bulletin 50-35.

Name.....
Company.....Dept.....
Address.....
City.....State.....

For more details circle NED-1104 on enclosed inquiry slip

BACKED BY 50 YEARS OF "KNOW HOW"

It's NICE to be Sure!

STANDARD and SPECIAL BALL BEARINGS Since 1902

OUR 50TH ANNIVERSARY 1902-1952

NICE BALL BEARING COMPANY
NICETOWN · PHILADELPHIA · PENNSYLVANIA

For more details circle NED-1107 on enclosed inquiry slip

Better Heat Distribution WITH McCORD Unit Heaters

HORIZONTAL TYPE HEATER

More Heat . . . Better Distribution

More heat, better distribution is the answer to any heating problem. McCord, because there is a model and type to meet each particular condition, will do a better heating job. Every improvement that engineers and the experience of many users could suggest is incorporated in the improved models of McCord Unit Heaters. Due to the design and careful attention to balance a new degree of quietness has been attained. The scientifically designed spiral fin tube heating surface provides maximum heat transfer capacity.

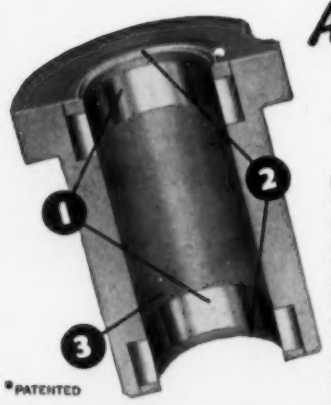
VERTICAL TYPE HEATER

McCORD CORPORATION
2580 E. Grand Blvd.
Detroit, Mich.

Specify McCORD ON YOUR NEXT JOB

For more details circle NED-1108 on enclosed inquiry slip

MORE HOLES— MORE ACCURACY— FASTER— AT LESS COST



*PATENTED

1. Tungsten carbide rings at the points of wear; 2. Steel rings protect drills and carbide; 3. Special hardened alloy steel body.

For information and prices write for Meyco Bushing Catalog No. 19.

MEYCO
Carbide Inserted Bushings Are Doing It Daily!

HOW? Like this: (1) Last longer . . . with a life—in most cases—as long as solid carbide bushings at prices that come close to the prices of ordinary steel bushings; (2) Increased life for your drill jigs and fixtures (3) Increased life for your drills and reamers; (4) Accuracy maintained for a LONG PERIOD of time; (5) Less non-productive machine time, less lost man-hours, because bushings need not be changed as often; (6) Inspection time saved, because of greater accuracy for a longer time; and (7) Less waste due to spoilage, for the same reason. Don't pass up a good bet! Get the dope on MEYCO Carbide Inserted Drill Jig Bushings today!

W. F. MEYERS CO., INC., BEDFORD, INDIANA

For more details circle NED-1109 on enclosed inquiry slip

HYDRAULIC POWER UNIT for oil or water service

Output fluid pressures up to 30,000 psi can be produced by packaged hydraulic power unit operating on 100 psi plant air supply. For oil or water service, model S-440 unit is applicable to uses where low volume output at high pressure is required, such as in hydrostatic testing. Installation requires two connections—one to plant air line and other to device to be serviced. All equipment, including air-operated pump, muffler, filter, lubricator, regulator, valves and gages are mounted on easy-to-carry Masonite base. Unit measures 12 x 12 x 24 in. and weighs 45 lb. Model 216-C pump is furnished in six standard models with ratios of 35 to 1, 60 to 1, 100 to 1, 150 to 1, 200 to 1 and 300 to 1, with output range from 3500 to 30,000 psi. Pump is available as separate unit for custom installations. Made by **Sprague Engineering & Sales Corp.**, 1146 W. 135th St., Gardena, Calif.

For more details circle NED-1110 on enclosed inquiry slip

UNIVERSAL pH METER precision instrument has range of 0-14.15 pH and 0-1415 microvolts

For laboratory research and industrial testing applications, universal pH meter is designed for all pH and rH work, for potentiometric titrations and for oxidation - reduction - potential investigations. Measuring accuracy of 0.01-pH or 0.5-mv is provided in range of 0-14.15 pH and 0-1415 mv. Unit has built-in cadmium standard cell and flexible cable for connection to 60-cycle ac power supply circuit. Transformer taps can be changed to accommodate voltages of 110, 125, 145, 200, 220 and 245. Instrument is housed in wooden cabinet.

Auxiliary chemical cabinet contains two glass electrodes, saturated calomel reference electrode, quinhydrone electrode, support with electrode holder, three glass beakers, funnel for filling calomel electrode, 0-50° C thermometer, 10-gr bottle of quinhydrone, bottle of potassium chloride crystals, bottle for concentrated KCl solution, three tubes containing 20 tablets each for buffer solutions of pH 2.6 and 8, and rubber tube with spare rubber lead and spare stoppers. Metal lined cover of cabinet is corrosion resistant and can be used as measuring board.

In hydrogen-ion concentration work, equipment can be used to control completeness of precipitation, coagulation, flocculation, rate of settling, adsorption, crystallization, speed or completeness of reaction, speed of filtration and corrosion. Made by **North American Philips Co.**, Research & Control Instruments Div., 750 S. Fulton Ave., Mt. Vernon, N. Y.

For more details circle NED-1111 on enclosed inquiry slip

BENDIX FRIEZ

Bendix-Friez THERMISTORS
(NEGATIVE TEMPERATURE CO-EFFICIENT CERAMIC RESISTORS)

● These temperature responsive resistors are useful as temperature measuring elements and as liquid level sensors; they are especially well suited to compensation where the circuit constants must be maintained irrespective of temperature changes. Since they are a fired ceramic, they are stable under practically all conditions and respond only to temperature changes.

Typical application in capsule form for temperature sensing of hydraulic oil.

Many other values can be obtained from standard diameter material. Because the thermistors are made in our own plant, under extremely careful control, special compositions, shapes, and resistance values, hermetically sealed or otherwise protected, can be made in any quantities to suit your individual requirements.

We invite your Inquiries Write Dept. I

BENDIX-FRIEZ STANDARD ROD TYPES

Size (inches)	@ +30°C.	@ 0°C.	@ —30°C.
.140 x ¾	45 ohms	88 ohms	193 ohms
.040 x 1.5	14,000 ohms	29,946 ohms	74,676 ohms
.018 x 1.5	40,000 ohms	94,040 ohms	262,400 ohms

FRIEZ INSTRUMENT DIVISION of Bendix AVIATION CORPORATION
1324 Taylor Avenue · Baltimore 4, Maryland
Export Sales: Bendix International Division, 72 Fifth Ave., N.Y. 11, N.Y.

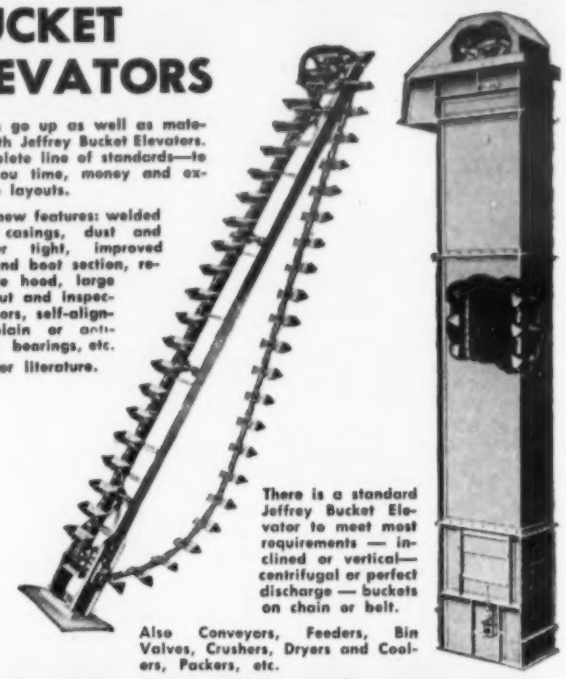
For more details circle NED-1112 on enclosed inquiry slip

BUCKET ELEVATORS

Savings go up as well as material with Jeffrey Bucket Elevators. A complete line of standards—to save you time, money and expensive layouts.

Many new features: welded angle casings, dust and weather tight, improved head and boot section, removable head, large clean-out and inspection doors, self-aligning, plain or anti-friction bearings, etc.

Send for literature.



There is a standard Jeffrey Bucket Elevator to meet most requirements — inclined or vertical—centrifugal or perfect discharge — buckets on chain or belt.

Also Conveyors, Feeders, Bin Valves, Crushers, Dryers and Coolers, Packers, etc.

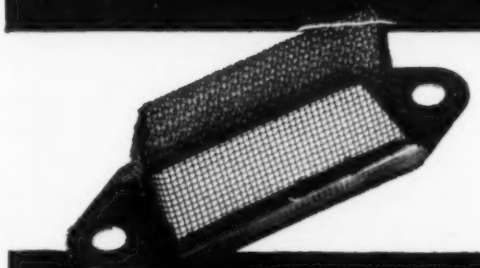
JEFFREY

ESTABLISHED 1877
THE JEFFREY MANUFACTURING CO.
952 Fourth St., Columbus 16, Ohio

For more details circle NED-1113 on enclosed inquiry slip

NEWARK Fabricated WIRE CLOTH PARTS

Available — a well-equipped plant with highly experienced fabricators.



Available — mesh cloth and space cloth made in our own plant.

All under one roof

Do you require parts made with one or more pieces of mesh cloth or space cloth — anything from 4 inch openings down to 325 mesh (105,625 holes/sq. in.)?

Our experienced fabricating service should be of value. We are in position to handle volume order business and, if desired, will be glad to help in designing the part requiring the metallic cloth. We know how to insert and fasten metallic cloth to get best results. We carry many standard sizes of wire cloth in stock. We have ample loom facilities to weave special cloths if necessary. We can handle any wire of any malleable metal.

This fabricated parts division of our business has grown by leaps and bounds. We have had many repeat orders. It could be due to the quality of wire cloth used and the care with which this cloth is assembled into the parts being fabricated.

NEWARK for ACCURACY

Ask for General Catalog "D".

Newark Wire Cloth COMPANY
351 VERONA AVENUE · NEWARK 4, NEW JERSEY

Philadelphia 3, Penna. 1311 Widener Bldg. · San Francisco, Calif. 3100 19th St. · Chicago, Ill. 39 N. Wacker Dr. · New Orleans, La. 520 Maritime Bldg. · Los Angeles, Calif. 1400 So. Alameda St. · Houston, Texas P. O. Box 1910.

For more details circle NED-1114 on enclosed inquiry slip

Cut Costs with MEAD MIDGET Air-Clamps

PNEUMATIC CYLINDERS

Horizontal and Vertical!

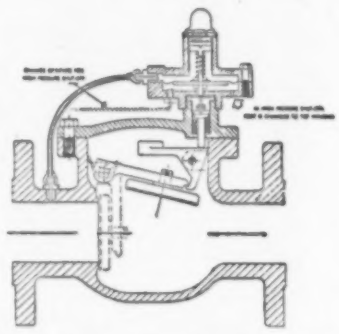
Both models deliver 80 lbs. pressure on a line pressure of 100 lbs. They'll save countless man-hours in assembly operations involving welding, riveting, bolting, etc. *Advantages over mechanized clamps:* 1. Any number can be operated by single master valves. 2. Easily installed in cramped corners. 3. Equal ram pressure at any stroke point. Send for new Mead AIR POWER Catalog, describing our line of Air-Clamps, Air Vises, Air Presses, Work Feeders, Valves, Controls, etc.

MEAD
SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. N-22-A, Chicago 41, Ill.

For more details circle NED-1115 on enclosed inquiry slip

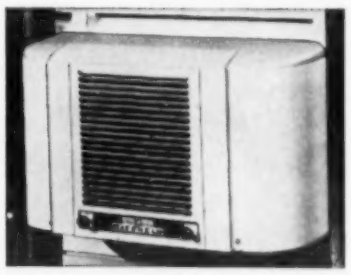
SHUTOFF VALVES
made in high and low pressure types

Protection against reduced or excessive flow through all types of pressure lines is afforded by Sentry line low and high pressure shutoff valves. They can be set to close within ½-oz of predetermined dangerously low or high pressure by dual spring control. Although valves cannot close prematurely, they form a positive line seal until reset by hand when reduced or excessive pressure causes automatic closing. Diaphragm control section is separate unit and will cause valve to close if damaged or destroyed. Valves are offered in 1 to 6-in. sizes, in bronze or semisteel. Steel valves with semisteel trim are available on special order. Made by **McRae Valve Corp.**, 620 S. Main St., Los Angeles, Calif.



For more details circle NED-1118 on enclosed inquiry slip

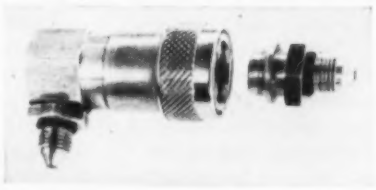
AIR CONDITIONER
window type unit is rated 1/3-hp



Using less current than six ordinary electric lamp bulbs, ⅓-hp 1952 model M-132 room air conditioner can be mounted in windows as narrow as 23 in. Because no filler panels are used, windows can be raised or lowered at any time for easy washing. Turbo-Dryer eliminates stagnation of refrigerant by creating turbulence within evaporator tubing, thus breaking up surface tension. Micro-Filter removes 99.9 per cent of dirt, dust and pollen from air. Made of 19-gage steel and finished in ivory, unit measures 13⅛ in. high, 23 in. wide and 30¾ in. deep. Capacity is 4600 Btu. Made by **Mitchell Mfg. Co.**, Dept. N-2, 2525 N. Clybourn Ave., Chicago 14, Ill.

For more details circle NED-1119 on enclosed inquiry slip

AIR LINE COUPLINGS
operated by hand up to 2200 psi



When mating halves of pneumatic line couplings are pulled apart, valve closing action prevents loss of line pressure. Made of aluminum alloy, couplings measure less than 2 in. long and have diameter of less than 1 in. Weight is under 2 oz. When joined, self-locking action of "dogs" insures positive connection. No wrench is needed to join or separate coupling at pressures as high as 2200 psi. Made by **E. B. Wiggins Oil Tool Co.**, Dept. NED, 3424 E. Olympic Blvd., Los Angeles 23, Calif.

For more details circle NED-1120 on enclosed inquiry slip

Pannier Steel Stamps

LAST LONGER ... MARK BETTER

7 REASONS WHY:

1. High tensile tool steel, for durability.
2. Roundedhead distributes hammer blows more evenly for better impressions, less "mushrooming," longer life.
3. Character and size plainly stamped on front for quick, easy identification.
4. "Master Marker" trademark for guaranteed replacement.
5. Rounded shank edges for comfortable use.
6. Extra metal in fillet for increased stamp durability, lower replacement cost.
7. Bevels scientifically angled for clearer stamping, longer life. Outer bevel extends beyond inner bevel depth; prevents breakdown of character face.

Use Pannier "Master Marker" Steel Stamps for a long life of clean-cut, legible impressions. Write for complete listing of styles and sizes.

Other PANNIER "MASTER MARKER" Products
- Steel Dies
- Rubber Dies
- Rubber Stamps
- Stencils & Supplies
- Embossing Equipment
- Branding Equipment
- Marking Inks
- Metal Tags & Badges
- Production Marking Machines

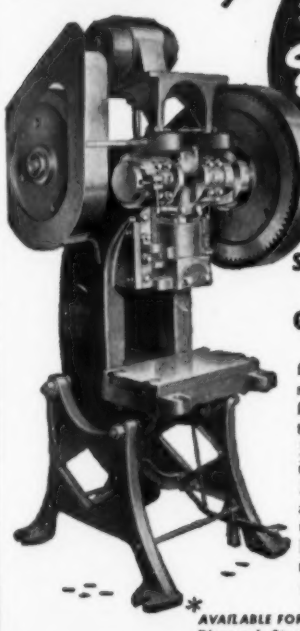
OFFICES
Pittsburgh, Chicago, Los Angeles, Youngstown, Philadelphia, Jacksonville

MASTER PANNIER MARKERS
THE PANNIER CORPORATION
301 Sandusky Street
Pittsburgh 12, Pa.

For more details circle NED-1122 on enclosed inquiry slip

Latest Design

POWERFUL 31 TON BACK-GEARED *Diamond* PUNCH PRESS



*** STRAIN GAUGE ANALYZED FOR GREATEST FRAME STRENGTH**

Strain-gauge analysis, applied for first time to Diamond punch presses, has resulted in more equal distribution of frame strength with maximum resistance to distortion. Cradle mounted, Diamond 31 Ton frame inclines to most convenient position. Other improvements include Micro-Finished surfaces on gibs, slides and bearings, assuring velvet-smooth ram travel with less friction and longer life. Diamond production tolerances are maintained so close that duplicate parts are interchangeable without hand fitting!

* *AVAILABLE FOR FIRST TIME* . . . A complete technical report on Diamond Strain-Gauge Analysis of Punch Presses and Operations. Every user of punch presses should obtain a copy! Sent free on request with circular featuring 9 - 14 - 30 and 31 Ton Diamond Punch Presses. Write today!

DIAMOND
DIAMOND MACHINE TOOL CO.
DEPT D • 3429 E. OLYMPIC BLVD., LOS ANGELES 23, CALIF.
MANUFACTURERS OF THE DIAMOND LINE OF PRECISION MACHINE TOOLS AND ACCESSORIES

For more details circle NED-1116 on enclosed inquiry slip

L-S "JACKSTACKER" TIERING TRUCK

The ONE and ONLY

1000 LB. CAPACITY TIERING TRUCK *with these* OUTSTANDING Fork Truck FEATURES

TELESCOPIC and TILTING
130" HIGH LIFT 83" Collapsed Height
44" TURNING RADIUS Extra Narrow Aisles
SHORTEST COUNTER BALANCED TRUCK Less than 4 ft. long.
PRECISION DESIGN and MANUFACTURE In our own shops. High pressure hydraulic system permits extra short 46½" length.
NO GREASE POINTS

The ONLY Truck with "ALL CONTROLS IN HANDLE HEAD"

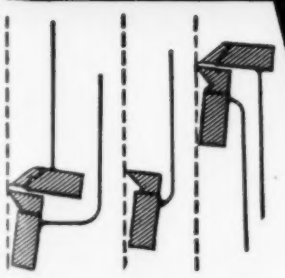
2 speeds forward. 2 reverse. Electric brake. Tilt out and in. Lifting. Lowering. Horn. Lock . . . Operates with handle VERTICAL (saves extra space) and in any other position.

For Distribution, Warehousing Receiving and Shipping
WIDELY USED with chisel forks WITHOUT PALLETS
Write for Bulletin 24

LEWIS-SHEPARD
LEWIS-SHEPARD PRODUCTS INC. 302 WALNUT ST., WATERTOWN 72, MASS.
MIDWEST PLANT: Crawfordsville, Ind. Sales and Service in Principal Cities

For more details circle NED-1123 on enclosed inquiry slip

BETA CHART PENS



...HOLD 2 to 4 TIMES MORE INK

Beta Fountain Pens hold two to four times the ink of ordinary chart inking pens. Regardless of the line thickness Beta Pens produce a smooth unbroken and uniform line. Pens shown are approximately actual size and can be arranged to reduce time interval between static and differential lines to only a few minutes. Beta Pens are especially suitable for seven day records. Price $1.10 (lower prices in quantities).

Send for bulletin No. 110.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

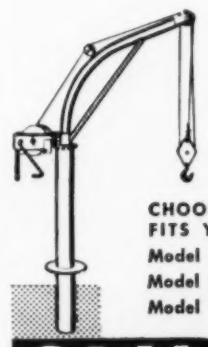
Available for Early Delivery

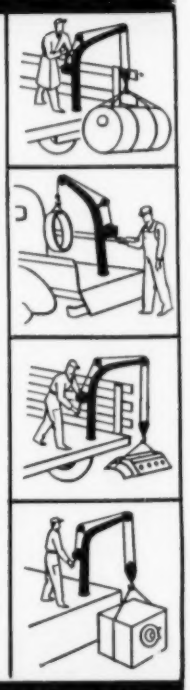
For more details circle NED-1117 on enclosed inquiry slip

BLUE HERON TRUCK CRANE SAVES..

TIME • MONEY • LABOR

ONE MAN can handle up to ONE TON easily with BLUE HERON TRUCK CRANE—and with greater safety! Crane swivels through full circle and can be lifted from socket by one man—leaving truck body clear. Many operators equip all trucks with sockets, change cranes from truck to truck as needed. Simple to install!



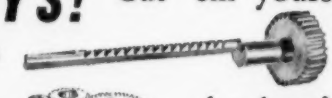


CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C.30A Cap. 500 lbs.
Model O.C. 30B Cap. 1000 lbs.
Model O.C.30C Cap. 2000 lbs.

CAM TOOL COMPANY, INC.
288 22nd STREET • OAKLAND 12, CALIF.

For more details circle NED-1121 on enclosed inquiry slip

KEYWAYS, KEYWAYS, KEYWAYS!

Cut 'em yourself like this  in by hand with an arbor press any width 1/16" to 1", in any bore from ¼" to 3", in sixty seconds. Write for descriptive folder and price list on the Kit to fit your need.

MAIL THIS COUPON FOR INFO AND PRICES

The du MONT CORPORATION, Greenfield, Mass.

Please mail descriptive folder and price list D on *Minute Man Keyway Broaches and Kits.*

Name.....

Company.....

Address.....

For more details circle NED-1124 on enclosed inquiry slip

HANSEN - THE TACKER with 1001 USES

ASSEMBLY of wood veneers is speeded up, saving time, labor and material, for Gibson, Inc., Kalamazoo, Mich., with the Hansen Model T-2 Tacker. Tacking operation makes loading of hydraulic presses easier, improves handling and prevents veneers slipping.

In every conceivable industry Hansen Tackers are making a record for themselves — automotive, radio, aviation, building, plastic, woodworking, shipping, display. What is your problem? Submit sample or sketch, with details. REQUEST BOOKLET

HANSEN

A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE.
CHICAGO 40, ILL.

For more details circle NED-1125 on enclosed inquiry slip

COFFEE URN
square design saves space

Of die stamped stainless steel construction throughout, Seco-Urn twin space saver coffee urn is square inside and out, with rounded corners for easy cleaning. Coffee is drawn down through seamless stainless steel tubing welded to bottom of stainless steel liner and is dispensed through stainless faucets. Self-closing water inlet valve is standard. Gas, electric and steam heated models are available in 2, 3, 4 and 5-gallon capacities. Large hot water reserves protect coffee temperature for instant brewing of fresh coffee. Units are available with thermostatic heat control and thermometer. Made by **Southern Equipment Co.**, Dept. NED, 5017 S. 38th St., St. Louis 16, Mo.

For more details circle NED-1127 on enclosed inquiry slip

TUBE FILLER & CLOSER
available in single and twin models for materials of various types

Exactly metered quantities of paste, cream, liquid or powder can be placed in tubes by No. 180 automatic tube filler and closer machine. From vertically mounted holders, tubes move to head where they are gravity filled from 15-gal hopper from bottom up to prevent air pockets. Tubes then pass to closing and crimping stations which produce quadruple fold closure. Code marking jaws can be supplied.

Single machine has capacity of 55 tubes per minute in size range from ½ to 1¾ in. diameter by 7½ in. long. Twin filler handles 85 tubes per minute up to 1½ in. diameter by 7 in. long. Both are available in special models. All parts are easily accessible for cleaning and adjusting. Optional equipment available includes air vacuum tube cleaner, cap tightener, no-tube-no-fill attachment, mechanical agitator and material heater. Made by **Arthur Colton Co.**, 3400 E. Lafayette Ave., Detroit 7, Mich.

For more details circle NED-1128 on enclosed inquiry slip

DO YOU KNOW? Shipment of electrolyte acid or corrosive battery fluid in polyethylene bottles with capacities to 1 qt has been approved by the Interstate Commerce Commission. Bottles are made by Plax Corp., 450 Asylum, Hartford, Conn.

For more details circle NED-1129 on enclosed inquiry slip

Now! CONTROL AIR OPERATIONS ELECTRICALLY!

PUSH BUTTON OR LIMIT SWITCH CONTROL FOR
- AIR CYLINDERS
- AIR CIRCUITS
- AIR-OPERATED PRESSES

Quiet . . . dependable . . . economical. Unlimited range of applications. Ideal for remote control or for building into equipment. Two types. Ask for Hannifin recommendations.

GET BULLETIN 230
Contains specifications, dimension table, wiring diagrams and other useful data.

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave., Chicago 24, Ill.

For more details circle NED-1131 on enclosed inquiry slip

SHELDON CHICAGO

A better Lathe from any angle

Judge it from any angle: for accuracy, stamina, rigidity or capacity (for size). Check its component parts—its spindle, spindle bearings, lead screw, apron, carriage, bed, gearing, or the power delivered by its drive—you will find the SHELDON Lathe a quality tool both in appearance and "under the hood".

Write for Catalog

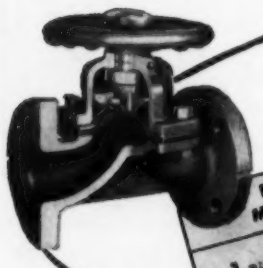
SHELDON MACHINE CO., Inc., 4215 North Knox Ave., Chicago 41, Ill.

For more details circle NED-1132 on enclosed inquiry slip

WHAT WOULD YOU SPECIFY

Fluid	Concentration	Temp.	Type of Valve	Valve Material
1 Sulphuric Acid	20%	120 F.		
2 Sulphuric Acid	100%	180 F.		
3 Hydrochloric Acid	32%	80 F.		
4 Hydrofluoric Acid	50%	125 F.		
5 Beer		200 F.		
6 Oxygen		Ambient		

We supplied Grinnell-Saunders Diaphragm Valves with . . .



Body Material	Diaphragm Material
1 Rubber lined	Natural rubber
2 Cast iron	KEL-F
3 Glass lined	Butyl
4 Magnesium	KEL-F
5 Polished bronze	White diaphragm
6 Cast iron*	Neoprene

*For oxygen service a high flash point lubricant is supplied. All valves for oxygen service are subjected to 300 lb. air underwater test.

In several of these cases other body materials or diaphragms might serve. Really important is the versatility of Grinnell-Saunders Diaphragm Valves in handling corrosive fluids, gases, compressed air, food, suspended solids . . . where corrosion, abrasion, contamination, clogging, leakage, maintenance are problems.

Grinnell-Saunders Valve bodies are stocked in cast iron, malleable iron, stainless steel, bronze, and aluminum, with other materials available on special order. Valve bodies can be lined with lead, glass, natural rubber or neoprene. Diaphragms are available of natural rubber and a number of synthetics to suit particular service conditions.

Features of the Grinnell-Saunders Diaphragm Valve

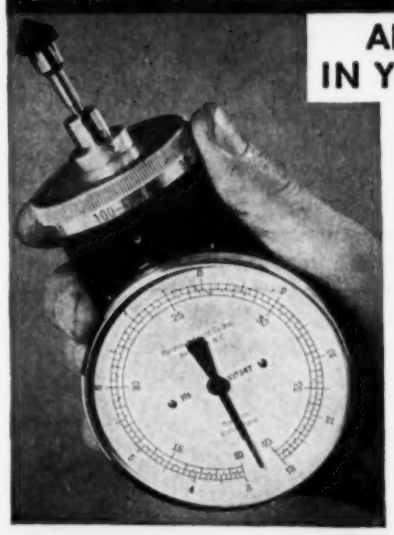
• diaphragm absolutely isolates working parts from fluid • diaphragm lifts high for streamlined flow in either direction • diaphragm presses tight for positive closure • body, lining and diaphragm materials to suit service • simple maintenance — diaphragm easily replaced.

GRINNELL
WHENEVER PIPING IS INVOLVED

Grinnell Company, Inc., Executive Offices, Providence, R. I.
Sales Offices and Warehouses in Principal Cities

For more details circle NED-1126 on enclosed inquiry slip

DON'T GUESS! TEST R.P.M. AND F.P.M. IN YOUR PLANT



They are the keys to production. Avoid loss of production due to slow speeds and feeds, or excessive wear because of abnormal high speeds by checking them with STICHT portable or permanently mounted Tachometers.

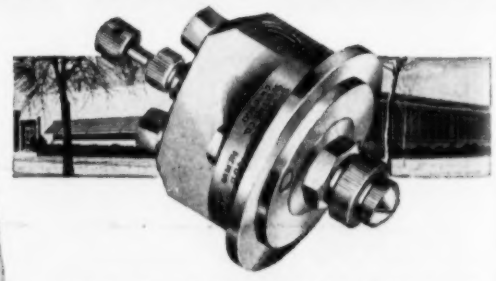
STICHT UNIVERSAL HAND TACHOMETERS

Centrifugal type, combine five ranges in one instrument such as No. 303; 30-12,000 RPM, No. 322; 60-24,000 RPM, No. 346; 120-48,000 RPM. Many others, Bulletin No. 1046.

HERMAN H. STICHT CO., INC.
Tachometer Headquarters
27 PARK PLACE NEW YORK 7, N. Y.

For more details circle NED-1130 on enclosed inquiry slip

to the 99 plants in 100 who use SPRAY NOZZLES



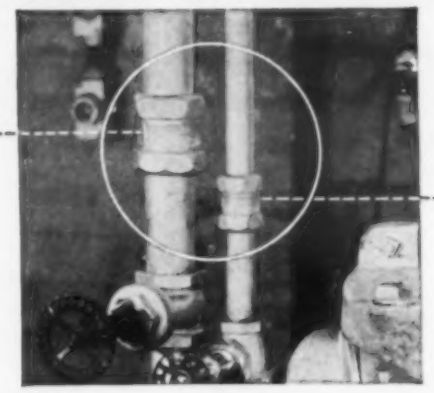
WRITE FOR

In the search for doing things better and faster, have you overlooked the importance of spray nozzles? Your application may be commonplace or complex . . . but whatever it is, properly engineered spray nozzles can make a vast difference. Let Spraying Systems Co., America's foremost authority on industrial spray nozzles show you why and how. As a first step, write for catalogs.

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3211 Randolph Street
Bellwood, Illinois

Catalog No. 22
General Industrial Spray Nozzles
Catalog No. 23
Pneumatic Atomizing Nozzles

For more details circle NED-1133 on enclosed inquiry slip



"FLEXIBLE-TIGHT" JOINTS FOR FACTORY PIPING

For piping up to 2" in diameter, Dresser Style 65 "No-Thread" Fittings provide quick, permanent connections. On equipment piping, on gas, oil, water, air lines, these handy joints stay tight despite vibration, expansion and contraction. No pipe threading, no exact pipe aligning. The only tool needed is a wrench. Write today for catalog.

DRESSER "NO-THREAD" FITTINGS

Dresser Manufacturing Division (One of the Dresser Industries), 59 Fisher Ave., Bradford, Pennsylvania. In Texas: 1121 Rothwell St., Houston. In Canada: 629 Adelaide St., W., Toronto. Sales Offices: New York, Chicago, Houston, San Francisco.

For more details circle **NED-1134** on enclosed inquiry slip

LITTLE HUSTLER CONVEYOR

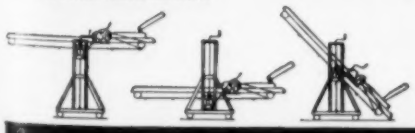
Portable, adjustable, versatile . . . LITTLE HUSTLER solves materials handling problems. It can be spotted instantly wherever needed and is particularly useful where working heights and layouts are subject to frequent change.

Usable either as an independent unit or as an auxiliary to permanent conveyor installations, LITTLE HUSTLER handles small and medium-size metal parts including cut-offs, blanks, formed stampings, etc.

This conveyor can be adjusted to any angle from horizontal to maximum of 45° by means of crank handle. Working height is regulated through 30-inch range by double-screw center lift.

LITTLE HUSTLER features all-steel welded construction, charging chute with positive trap, and two swivel and two stationary casters. Standard belting is neoprene-impregnated fabric. For applications involving excessive wear, MAY-FRAN hinged-steel belting can be supplied for greatly increased belt-life. Also available in the MAY-FRAN line of conveyors is the semi-stationary Model S LITTLE HUSTLER, which is specifically designed for applications in which complete portability and adjustability are not required.

Write today for 8-page illustrated catalog containing complete price and specification information.



449-MF

MAY-FRAN ENGINEERING, INC.

1711 Clarkstone Road • Cleveland 12, Ohio

For more details circle **NED-1135** on enclosed inquiry slip

ELECTRONIC TIMER

momentary impulse starts adjustable unit having 1.5 to 12-second ranges

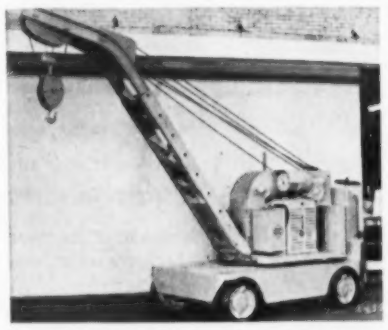
Suitable for wide range of precision timing services, type CK electronic timer can be started by either a momentary or sustained contact. Cold cathode trigger tube is employed and requires no filament current. Timing is instant and accurate without tube warm-up period, and unit can be recycled immediately. Separate set of single-pole single-throw normally-open contacts close at start and open at the end of timed cycle. Contacts will handle 8 amperes and can be used to control separate load.

Time ranges of 0-1.5, 0-3, 0-6 or 0-12 seconds are available. Dial with 100 graduations allows timer to be set for any desired percentage of total range. Device operates directly from 105-125 v, 60 cycles ac. Its delay relay handles 8-ampere 125-v noninductive alternating current load in single-pole double-throw circuit with no intermediate off. Terminal board has plainly marked screw terminals for all electrical connections. Made by **Farmer Electric Co.**, 21-A Mossfield Rd., Waban 68, Mass.

For more details circle **NED-1136** on enclosed inquiry slip

INDUSTRIAL CRANE

handles odd-shaped loads with telescoping boom



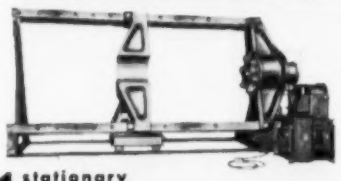
Equipment or materials not easily handled by fork or platform truck can be handled with ease by model CZ truck-mounted crane. Electrically-powered model is redesigned with wider bed and higher operator control pedals for better forward visibility. Features include four-wheel steering, telescoping boom of 12 to 19-ft length, worm drive, welded steel frame and individual motors with solenoid operated brakes for powering slew, hoist and boom.

Conventional wheel steer is standard; electric power steering is recommended with heavy loads. Power is furnished by electric storage battery or gas-electric unit. Crane capacity is 10,000 lb at 5½-ft radius. With boom extended to 19 ft, hook height of 18 ft can be obtained. Truck turns in 95-in. intersecting aisles. Maximum slew is 296 degrees. Optional equipment includes outriggers, electromagnet and remote control of boom, hook and slew. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 14, O.

For more details circle **NED-1137** on enclosed inquiry slip

which of these forcing presses will do your job best?

HYDRAULICS Rodgers KEEP THE WORLD MOVING



1 stationary 75° or 90° inclined 100, 200, 300, 400 or 600 ton

2 stationary horizontal 100, 200, 300, 400 or 600 ton

3 portable 100 or 200 ton

Rodgers line of versatile forcing presses have separate pumping units—choose from hand-operated or power-driven pumps . . . The hydraulic cylinder is removable from head member for servicing or for other use . . . Tracks, tension bars, abutment member and head member are all separate units to facilitate handling and erection of press . . . Presses with power pumps can be controlled from any desired location.

Get complete information and you'll see why Rodgers Forcing Presses are best for your type service jobs.

Send for Catalog

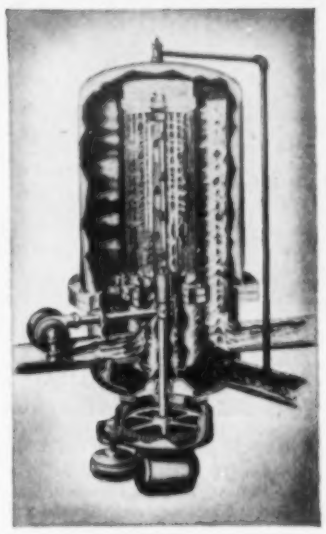
Rodgers Forcing Press Catalog No. 315A has 20 pages of descriptions and specifications on the complete line.

Rodgers Hydraulic, Inc. 7425 Walker St., St. Louis Park, Minneapolis 16, Minn. — HYDRAULIC POWER EQUIPMENT

For more details circle **NED-1138** on enclosed inquiry slip

Save Water... Cut Bills

with this strainer



Make raw river or lake water fit for industrial use by passing it through a Cuno FLO-KLEAN.

FLO-KLEAN strains out trash at flow rates up to 20,000 gpm. No attention needed—with continuous backwash cleaning* of the strainer and automatic top and bottom blow-down.

Reclaim used process water with FLO-KLEAN—save water bills and heating costs.

Write for FLO-KLEAN bulletin—see how FLO-KLEANS have paid for themselves in as short a time as six months. Cuno Engineering Corporation, Dept. 703F, South Vine Street, Meriden, Connecticut.

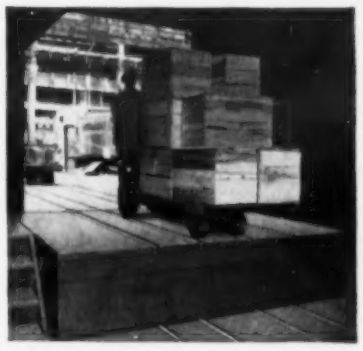
*Even the backwash water is reclaimed—not a drop wasted!

CUNO *Fluid Conditioning* Removes More Sizes of Solids from More Types of Fluids

For more details circle **NED-1139** on enclosed inquiry slip

Globe Ramp Eliminator

Keeps Plant Traffic on the Level



A Globe Ramp Eliminator averts the dangers of makeshift gangplanks and provides safe, dependable, and fast vertical transportation between levels. This means less risk of damage to materials or injuries to workers.

With a Globe Ramp Eliminator, movement of materials is always across a sturdy, safe level platform instead of up or down steep ramps or temporary makeshifts. This adds up to safer, faster, easier, and cheaper handling of goods.

Got a Lifting Problem?

GLOBE *has the answer*

Muscle is the world's most wasteful lifting power. A Globe OiLIFT will do it cheaper and better.

For helpful information on Self-Leveling Ramps, Machine Loading Lifts, Industrial Truck Service Lifts, Production Lifts, etc., write for bulletin NE-313.

GLOBE HOIST COMPANY • 1000 E. Mermaid Lane, Philadelphia 18, Pa.
(Factories at Des Moines, Iowa & Philadelphia, Pa.)

For more details circle **NED-1140** on enclosed inquiry slip

feature for feature...

THIS NEW SQUARE D VOLTAGE TESTER *Tops them ALL!*

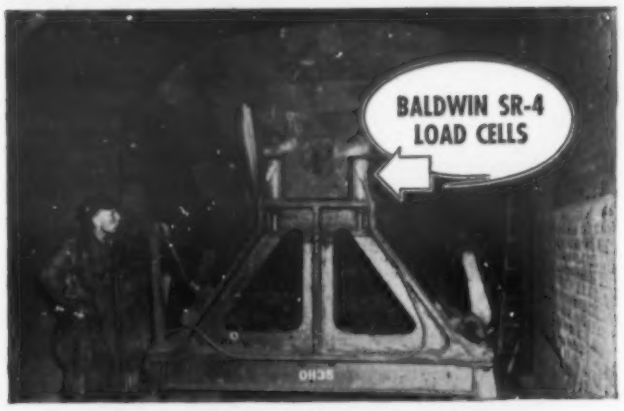
for further details, write Square D Company, 6060 Rivard Street, Detroit 11, Michigan

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

DETROIT • MILWAUKEE • LOS ANGELES

For more details circle **NED-1141** on enclosed inquiry slip



NOVEL, *FAST* ELECTRONIC WEIGHING SPEEDS ALLOY STEEL MIXING

To produce small batches of alloy steels to exact chemical analysis, this steel maker built Baldwin SR-4 Load Cells into ladle supports. As needed, the weight of molten metal is quickly, accurately read on an indicator in a control pulpit . . . the exact amount of alloy to be added is determined, as is the number of ingots that can be poured.

Great economy has been realized . . . efficiency increased . . . alloy composition accurately predetermined.

Wherever there is a difficult problem in measuring torque, pressure, explosions, depth, weight, others, SR-4 measuring devices frequently offer an easy solution. Write for full information.

BALDWIN-LIMA-HAMILTON
TESTING HEADQUARTERS
Philadelphia 42, Pa.
In Canada: Peacock Bros., Ltd., Montreal, Quebec

▲ For more details circle **NED-1143** on enclosed inquiry slip ▲

A Journeyman's Tool, built to stand up under constant, on-the-job Contractor or industrial use . . .

● **NO STARTING HOLE NEEDED** . . . Simply place guide next to material and "rock" tool into an upright position.

● **CUTS RIGHT THRU IMBEDDED NAILS** . . . wood, plaster, iron pipe, sheet metal, "Transite" and most other materials —even in cramped quarters.

● **FITS HEAVY DUTY 1/4" or 5/16" DRILL** . . . as easy as changing bits! Overall length only 10¾"; weight only 3 lbs. 6 ozs.

● **BUILT FOR CONSTANT DUTY OPERATION** ..Built-in blower keeps Super-Saw cool even when used continuously and blows sawdust away from cutting line. Replaceable "Oilite", phosphor bronze and high speed ball bearings throughout. Write for Bulletin R2

Cutting opening in oak flooring in less than 3 minutes—no starting hole needed!

Listed on Federal Supply Schedules. Class 40 Material.

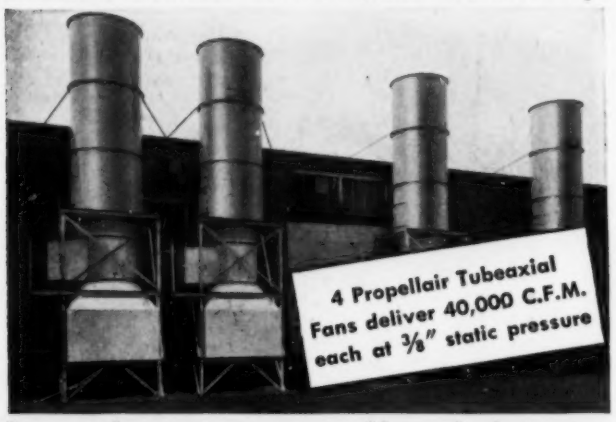
R.C.S. TOOL SALES CORPORATION
JOLIET, ILLINOIS, U. S. A.

▲ For more details circle **NED-1144** on enclosed inquiry slip ▲

60% LESS H. P.

and lower initial cost for fume removal

at Estate Heatrola Div. of Noma Electric Corp.

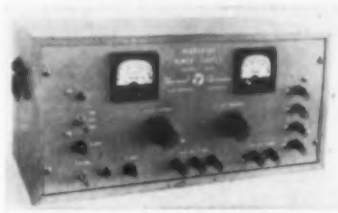


Let us study *your* air movement problem and submit recommendations without cost or obligation. Propellair has fans of types, sizes and capacities to meet almost every industrial ventilating need. Write for Catalog N-3082.

PROPELLAIR
DIVISION OF ROBBINS & MYERS, INC.
SPRINGFIELD · OHIO

▲ For more details circle **NED-1145** on enclosed inquiry slip ▲

REGULATED POWER SUPPLY
voltage variable from 0 to 500 v



Continuously variable voltage from 0 to 500 v dc at 0 to 300 milliamperes or bias voltage from 0 to 150 v with 2 milliampere maximum can be furnished by improved model 100A-5 regulated power supply. Unit also furnishes two independent outputs of low alternating current voltage that can be used separately or combined to supply either 6.3 v at 6 amp or 12.6 v at 3 amp. Variation of high voltage from no load to full load or line fluctuations from 105 to 125 v is less than 0.2-v. Internal impedance is less than 1 ohm dc and under 0.25-ohm from 20 cycles to 50 kc. Supply is offered in custom built birchwood cabinet, steel cabinet or rack and panel mounting. Made by **Universal Electronics Co.**, Dept. N2, 2012 S. Sepulveda Blvd., Los Angeles 25, Calif.

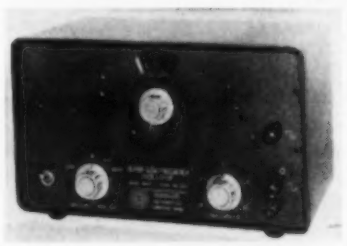
▲ For more details circle **NED-1146** on enclosed inquiry slip ▲

SPRING BALANCE
checks tension and contact pressure

Offered in eight ranges from 0-10 grams to 0-250 grams, this Swedish-made spring balance permits accurate testing of relay and switch contact pressures and measuring of spring tension. Readings in grams are taken in clockwise and counterclockwise motion, and needle always returns to zero. Slight ball at tip of 1⅝-in. extension arm facilitates grasping of springs, and dial diameter is 1½ in. Price including leather case is $15.40. Distributed by **Kay Instrument Sales Co.**, Dept. NED, 843 Tenth Ave., New York 19, N. Y.

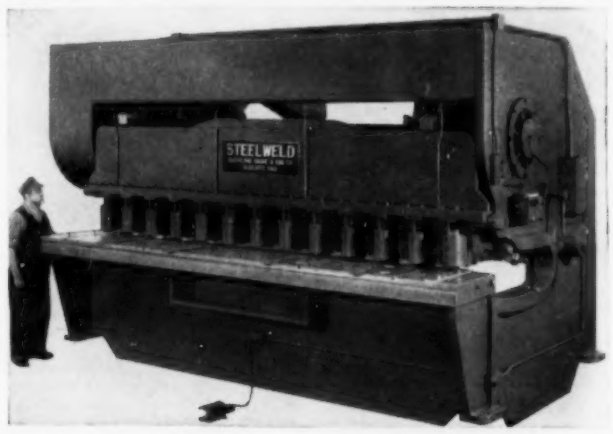
▲ For more details circle **NED-1147** on enclosed inquiry slip ▲

OSCILLATOR
for ultra-low frequency requirements



Both sine and square wave voltages can be provided at any frequency between 0.009 and 1100 cps by model 400-A ultra-low frequency oscillator. A RC bridge sine wave oscillator circuit is employed with special circuitry to eliminate tuning and switching transients. Low hum and distortion, good amplitude constancy over entire frequency range, single scale logarithmic dial with vernier tuning control and low input power are featured. The 12 x 7 x 8-in. unit can be used for design and testing of servomechanisms, geophysical and seismological instruments and feed-back amplifiers, for vibration checks and in conjunction with tuning and production controls. Made by **Krohn-Hite Instrument Co.**, Dept. NED-1, 580 Massachusetts Ave., Cambridge 39, Mass.

▲ For more details circle **NED-1148** on enclosed inquiry slip ▲



CUTS 12 FEET 3/4 INCH STEEL PLATE

1. 30 strokes per minute.
2. Operated by electric foot switch.
3. Cuts by pivoted-blade principle.
4. Fast Micro-Set knife adjustment.
5. 36-inch throat permits slitting wide plate.
6. Lift-up type ball-bearing back gauge.
7. Heavy welded one-piece steel frame.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free copy of catalog No. 2011.

THE CLEVELAND CRANE & ENGINEERING CO.
6630 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

▲ For more details circle **NED-1149** on enclosed inquiry slip ▲

with DUNHAM VACUUM PUMPS

You get better results from fuel dollars with Dunham Vacuum Pumps. That's because they easily produce—*and maintain*—vacuums up to 26 inches . . . your guarantee of rapid steam circulation . . . shorter "heat up" periods.

Maintenance costs are negligible. There are no moving parts under vacuum. No close tolerance parts to get out of adjustment.

Dunham Pumps are easy to install; take up minimum floor space. For full information, WRITE FOR BULLETIN 1401-14.

DUNHAM

C. A. Dunham Co.
400 W. Madison St., Chicago 6, Ill.
In Canada:
C. A. Dunham Co. Ltd., Toronto
In England:
C. A. Dunham Co. Ltd., London

HEATING SYSTEMS AND EQUIPMENT

▲ For more details circle **NED-1150** on enclosed inquiry slip ▲

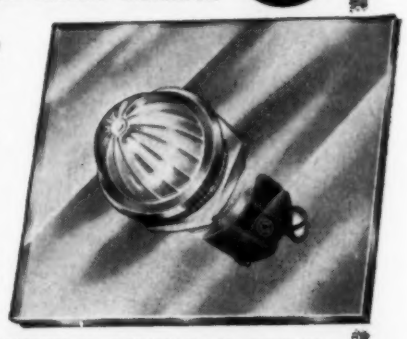
▲ For more details circle **NED-1151** on enclosed inquiry slip ▲

FOR YOUR PANEL

DIALCO

A NOVEL and UNIQUE CIRCUIT INDICATOR

DESIGNED FOR NE-51 NEON LAMP
For 110 or 220 volt circuits
The required resistor is an integral part of this assembly —"built-in."
RUGGED DEPENDABLE LOW IN COST



PATENTED: No. 2,421,321; Cat. No. 521308-997

WILL *YOU* TRY A SAMPLE?

Write on your company letterhead. We will act at once. *No charge, of course.*

SEND FOR THE 192 PAGE HANDBOOK OF PILOT LIGHTS

Among our *thousands of Pilot Light Assemblies* there is one which will fit *your special conditions.* Many are especially made and approved for *military* use. We pride ourselves on prompt deliveries—*any quantity.*

ASK FOR OUR APPLICATION ENGINEERING SERVICE

Foremost Manufacturer of Pilot Lights
The DIAL LIGHT COMPANY of AMERICA
900 BROADWAY, NEW YORK 3, N. Y. SPRING 7-1300

▲ For more details circle **NED-1152** on enclosed inquiry slip ▲

Pays 400% per year

Saves $11,549 annually—in lower scrap losses, faster production

®MULTIPRESS brings typical gains at Penn Electric Switch Co., Goshen, Ind.

THE JOB—Staking five metal parts on a bakelite base, with a single ram stroke, to form the magnetic switch shown above.

THE RESULTS—1. Production speed almost doubled. 2. Scrap losses 84% lower. 3. Two types of switches staked in continuous 5 to 1 ratio, without tooling changes. 4. Quality of product *uniformly* higher. 5. "Chasing" threads on staked parts no longer necessary. 6. Work hazards eliminated. 7. Operators like the quieter, smoother action of Multipress. 8. Total saving: $11,549.00 *per year* on a $3000 Multipress setup.

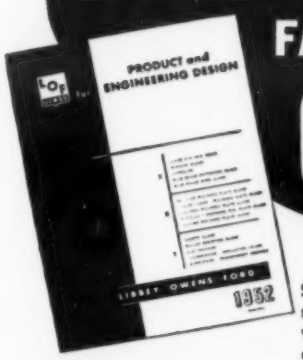
If you are interested in gains like these, for almost any job in the "pressing" field, send now for full details on the fast, versatile, oil-hydraulic Multipress. 8 frame sizes; one to 50-ton capacities. Write today!

DENISON HydrOIlics

The DENISON Engineering Co.
1151 Dublin Rd., Columbus 16, O.

▲ For more details circle NED-1153 on enclosed inquiry slip ▲

GET THIS FREE BOOK OF FACTS ABOUT GLASS



Saves time in designing and specifying, suggests economical ways of using flat glass in place of other scarce, expensive materials.

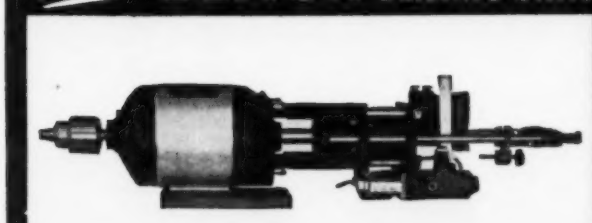
Complete specifications, including thicknesses, sizes, weights and physical characteristics of all types of flat glass are tabulated in this condensed, easy-to-read booklet. The information it contains is ideal for users, designers and buyers of glass for all types of industrial applications—sheet glass, polished plate glass, *Electrapane** (electrical conducting glass), *Thermopane** insulating glass, *Tuf-flex** tempered plate glass, safety glass and *Vitrolite** opaque colored glass.

*® *Write for your copy—ask for bulletin SPD—51*

LOF GLASS
LIBBEY·OWENS·FORD GLASS COMPANY
9322 NICHOLAS BLDG.
TOLEDO 3, OHIO

▲ For more details circle NED-1154 on enclosed inquiry slip ▲

New BLACK SELF-CONTAINED DRILLING UNITS



NO SPLINES — Self-contained units, at low cost, for drilling, tapping, chamfering, reaming and similar operations.

NO GEARS — New principle employs traversing motor shaft for work spindle, applies even torque with practically no end play. Drill has air feed for rapid advance to work—hydraulic control to completion of work cycle with uniform feed. Tapping unit controlled so tap follows its own lead without chamfering first thread or stripping threads on return stroke. Easy adjustment—depth accuracy to within .001".

NO CAMS

NO CLUTCHES

NO REVOLVING WEIGHTS — Operate in any position. Wide range of speeds and sizes.

Write for complete information

BLACK DRILL COMPANY, INC.
1380 EAST 222nd STREET CLEVELAND 17, OHIO

▲ For more details circle NED-1155 on enclosed inquiry slip ▲

VACUUM TUBE VOLTMETER for electronic and industrial use

Providing sensitivity and ranges for quick and accurate measurement of sine or complex waves, model 215 vacuum tube voltmeter is suitable for electronic design, testing or industrial laboratory use. Instrument features dual-purpose alternating-direct current probe with built-in switch and 5-in. scale meter with Lucite case. Portable shock-resistant plastic case has Neolite handle. As direct current voltmeter, it has range of 0 to 1.5, 3, 12, 30, 120, 300 and 1200 v and input resistance of 10 megohms. Range as ohmmeter is 0.2 ohms to 1000 megohms. RMS alternating current range is 0 to 1.5, 3, 12, 30, 120, 300 and 1200 v and peak-to-peak is 0 to 4, 8, 32, 80, 320 and 3200 v. Made by **Hickok Electrical Instrument Co.**, 10547 Dupont Ave., Cleveland 8, O.

▲ For more details circle NED-1156 on enclosed inquiry slip ▲

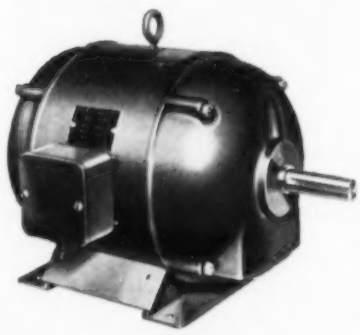
BRAKE DRUM TRANSFER DEVICE minimizes coining press hazards

Indexing, advancing and unloading 22-lb brake drums through 600-ton automotive coining press is function of transfer mechanism designed to eliminate danger to operator while feeding and unloading. Previously, operator placed hands beneath punch while locating heavy drum properly in die. Although brake drum line is geared to operate at maximum speed of six per minute, transfer device can deliver twelve per minute. Developed by **Sahlin Engineering Co.**, 267 Ferndale St., Birmingham, Mich.

▲ For more details circle NED-1157 on enclosed inquiry slip ▲

ELECTRIC MOTORS line now includes ratings to 125 hp

Four frame sizes have been added to the All-Weather line of standard motors and include NEMA frames 444, 445, 504 and 505. Available in ratings to 125 hp, motors are designed to resist moisture and corrosion. Steel parts have baked rust-resisting undercoating of Robinite. Rotor assembly is treated with rust inhibitor, and cast-iron end heads and terminal box are treated with zinc chromate. Prelubricated sealed ball bearings withstand conditions of dust, temperature, humidity and speed. Coils also are designed for all-weather service. End-to-end straight-line ventilation and auxiliary air passages through rotor as well as between windings and shell are employed. Made by **Robbins & Myers, Inc.**, 1300 Lagonda Ave., Springfield 99, O.



▲ For more details circle NED-1158 on enclosed inquiry slip ▲

NEW CONCAVE ROLLER CONVEYOR for shells and other cylindrical objects

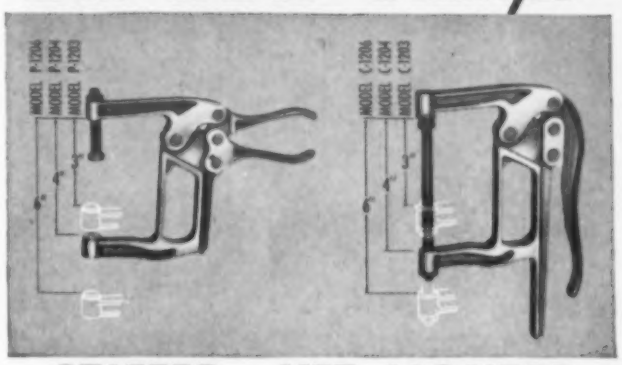
Shells and other cylindrical objects can be more efficiently handled without wasting man power by this new Alvey-Ferguson Concave Roller Conveyor. It keeps cylindrical objects in the center of the conveyor line, prevents them from slipping to either side or sliding off as frequently happens when ordinary straight or flat type rollers are used. In most cases no guard rail is necessary, thus shells can be placed on or removed from conveyor line more quickly and easily than when they must be lifted over a guard rail.

Made of No. 10 gauge steel tubing, the new A-F Concave Roller Conveyor is available with a 7/16" shaft for ordinary work or a 11/16" shaft for heavy duty work—available with plain, dust-tight or grease-seal ball bearings. Width of roller is 4⅝", for handling 3" shells and larger. The concave rollers can be furnished with Neoprene coverings, if desired, to prevent scratching and for complete protection of the objects moving along the line. Both straight and curved sections are available.

For latest information on modern, efficient handling methods for all types of products and materials, write **The Alvey-Ferguson Co.**, 30 Disney St., Cincinnati 9, Ohio. Advt.

▲ For more details circle NED-1159 on enclosed inquiry slip ▲

Six NEW Clamps



STIFFER—YET LIGHTER REQUIRE LESS EFFORT TO CLAMP

Here is another forward step in KNU-Vise clamps for efficient, fast and secure clamping.

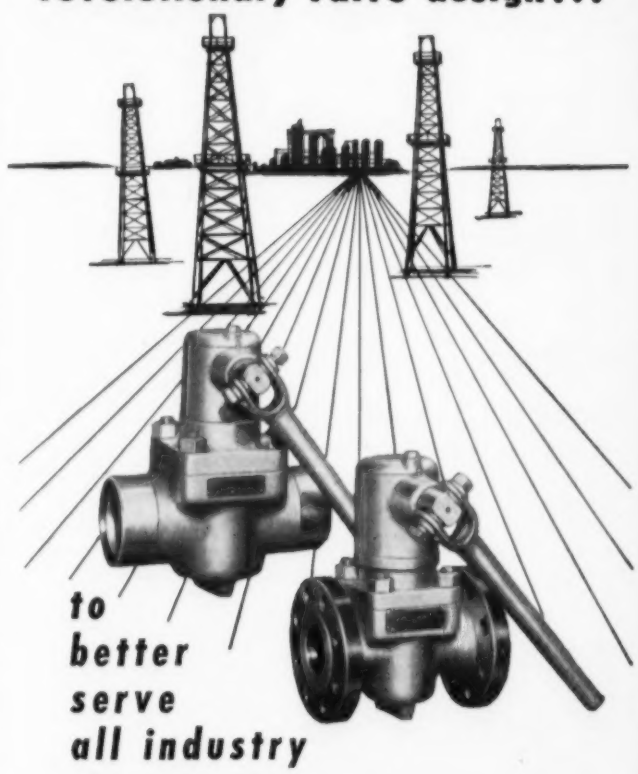
These six new clamps made of heat-treated steel forgings are stiffer, yet lighter, and require less hand effort to clamp. At the same time, a greater clamping force is obtained. In addition, the new hand-hold design of the C-Clamp (at right) provides a guard to protect the user's fingers while clamping. A second spindle, instead of the anvil, can be furnished for special applications.

Sales offices in principal cities. Teletype DE 49.

KNU-VISE PRODUCTS **LAPEER MFG. CO.**
3062 DAVISON ROAD • LAPEER, MICHIGAN
WESTERN DIVISION: 422 MAGNOLIA ST. GLENDALE, CALIF.

▲ For more details circle NED-1160 on enclosed inquiry slip ▲

from the oil fields—a revolutionary valve design...



to better serve all industry

The remarkable Cameron Non-Lubricated Lift Plug Valve combines all of the advantages of gate and plug valves without retaining the disadvantages of either type. In addition, the seat which is not attached to the valve body, being a separate member, utilizes pressure forces to improve the seal and eliminate the effects of body distortion; Non-Lubrication—easy operation and a tight seal are assured without the aid of grease, a particularly desirable feature in industries where cleanliness is essential; and an ingenious operating mechanism which, for the first time, makes practical use of the lift-turn-reseat operating principle.

Offered first for highly corrosive acid and extreme pressures in oil industry service, the Cameron Non-Lubricated Lift Plug Valve is now in heavy demand because of its low maintenance and fine performance in all industrial services.

Cameron Iron Works, Inc.
P. O. Box 1212 Houston, Texas
Export: 74 Trinity Place, New York, N. Y.
Represented in the sterling area by: British Oilfield Equipment Co., Ltd., Duke's Court, St. James's, London S.W.1, England.

Cameron NON-LUBRICATED LIFT-PLUG VALVES

▲ For more details circle NED-1161 on enclosed inquiry slip ▲

FAST OPERATION . . .
CONSTANT SERVICE

AMERICAN MONORAIL CRANE

This new American MonoRail Crane is ruggedly built to handle loads up to 10 tons at operating speeds of 500 feet per minute. Articulated trolleys assure perfect alignment of trucks for smooth crane travel.

Let an American MonoRail engineer tell you how you can get fast, constant service not only on the craneways, but also through adjacent areas by way of interlocking MonoRail systems.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

▲ For more details circle NED-1162 on enclosed inquiry slip ▲

CUT SPRAY PAINTING COSTS

by rapidly wet painting three-dimensional parts, one color after another, through the use of our accurate, snug-fitting

ELECTRO-FORMED METAL MASKS
(Made by Patented Process)
and foot treadle
AIR-OPERATED FIXTURES

which position and hold the piece snugly in the mask, maintain the desired pressure, and permit the operator to use both hands.

Plug-type masks for keeping depressed areas clear, while spraying background; lip-type masks for protecting the background while painting depressed areas; and block cutout plane surface type masks.

Clean, sharply defined letters and decorative effects are obtained on intricate die castings, stampings and plastic forms by accurate control of painted areas with no fogged edges. After-wiping or buffing off of overspray is unnecessary. The "loose" inside of letters and numerals, such as "O" and "6", is held in position by arched bridging to eliminate objectionable "ties."

We also design, engineer and build
COMPLETE AUTOMATIC SPRAY EQUIPMENT
(with or without masks)
MASK WASHING EQUIPMENT and AIR-OPERATED CLAMPS, FIXTURES AND TOOLS for

positioning parts in masks while painting or holding parts in place for other operations, such as welding.

Automatic, entirely air-operated machines for spray decorating a variety of small plastic and metal parts—one color after another—at speeds of up to 3600 per hour.

Eliminates the hazards of electric motors, mercury or solenoid switches and the cost of explosion-proof electrical equipment.

Masks are inserted so as to be flush with top of the working table. Spraying is from below. Frequency of mask cleaning greatly reduced. Dial regulates the cycling speed. Using a conveyor belt, operator can use both hands to load.

Another dial regulates the amount of paint sprayed. At any given setting, the same amount of paint is sprayed on every part, regardless of the speed of the loading cycle. Effects paint savings of up to 50 percent over hand spraying.

Employs 8 latest automatic guns and two 2-gallon air-agitated paint pressure tanks with four insert containers.

SEND COUPON NOW!

CONFORMING MATRIX CORPORATION
338 Toledo Factories Building Toledo 2, Ohio
Please send, without obligation, details on ( ) Hand masks; ( ) Mechanical masking fixtures; ( ) Air-operated masking fixtures; ( ) Stationary automatic spray painting masking machines; ( ) Rotary table automatic spray painting masking machines; ( ) Quotation on masks for parts (or prints) which I am forwarding.
Name .....
Firm .....
Street .....
City ..... State .....

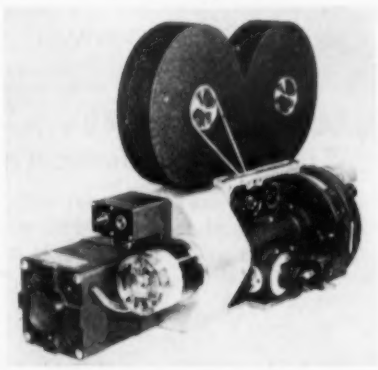
▲ For more details circle NED-1163 on enclosed inquiry slip ▲

MASS SPECTROMETER provides fluid mixture analyses plus isotope-ratio recording

Analytical mass spectrometer used to make rapid, accurate analyses of unknown, complex mixtures of gases and liquids is designed for laboratories having moderate analytical loads of routine nature. It is also valuable in research and exploratory applications involving both mixture analysis and stable isotope tracer techniques. Known as model 21,401, this electronic spectrometer also has possible application in analytical work of chemical and petroleum industries. Instrument is compact and incorporates numerous automatic devices to minimize operator errors and effect savings in time required for analysis. Problems which ordinarily might take hours, days or even weeks can be solved in few minutes by spectrometer. Made by **Consolidated Engineering Corp.**, Sierra Madre Villa & La Tierra St., Pasadena 8, Calif.

▲ For more details circle NED-1164 on enclosed inquiry slip ▲

SYNCHRONIZED CAMERA DRIVE fits standard units for precision recording and testing applications



Dependable, consistent and accurate operation of a series of motion picture cameras to take pictures simultaneously is provided by the Servo-Sync camera drive system. Maximum possible deviation of shutter position in this system, which uses circular rotating camera shutters, is less than 1 degree. At 12 frames per second, accuracy is within 23 microseconds.

Drive has been applied to standard Wollensak 35-mm motion picture cameras which use interchangeable 400 and 1000-ft film magazines. System is equally adaptable to large number of motion picture, scientific and ribbon frame cameras, and motion picture and process projectors. Two or more cameras can be synchronized by this system.

Among the scientific and engineering applications of this system are data recording, flight testing, missile tracking, ordnance evaluation and similar uses where two or more sources of information must be recorded at essentially the same time. Made by **J. A. Maurer, Inc.**, 37-01 31st St., Long Island City 1, N. Y.

▲ For more details circle NED-1165 on enclosed inquiry slip ▲

THIS IS ONE PLACE IN YOUR PLANT FOR PRIME-MOVER

This Prime-Mover is hauling away scrap from production machines. Carries 1500 lb. load under power, forward and reverse.

Aids Your Good House Keeping Program!

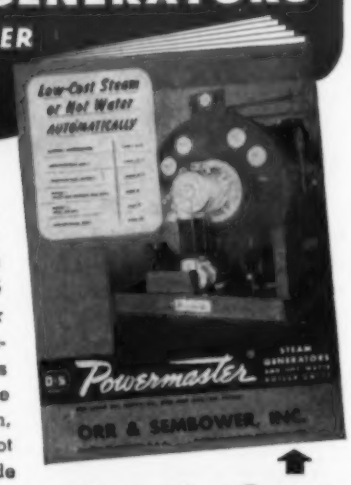
Wherever there are filings, cuttings and other scrap to be carried away, Prime-Mover helps maintain a regular "plant clean-up schedule". Good House Keeping pays dividends. Prime-Mover gets the job done speedily, with a saving in manpower as a bonus. Write for helpful data.

THE PRIME-MOVER COMPANY
MUSCATINE, IOWA

The Bell PRIME-MOVER

▲ For more details circle NED-1166 on enclosed inquiry slip ▲

Powermaster®
Fully Automatic
STEAM GENERATORS
and HOT WATER BOILER UNITS
Save Fuel!



For light oil, heavy oil, gas and gas/oil firing. Steam generating units from 15 to 500 HP.—15 to 200 p.s.i. Hot water boiler units 30 p.s.i. Reduce operating costs as much as 40% — save man-hours — get clean, dependable heat and hot water. A.S.M.E. Code construction.

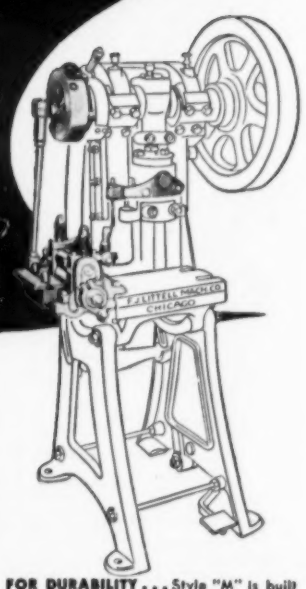
Write For Bulletin

ORR & SEMBOWER, INC.
930 Morgantown Rd., Reading, Pa.

BUILDERS OF DEPENDABLE BOILERS SINCE 1885

▲ For more details circle NED-1167 on enclosed inquiry slip ▲

FOR LOW COST AND BIG RESULTS
Feed Your Presses With
LITTELL
STYLE "M" AUTOMATIC
ROLL FEED



FOR SPEED . . . With Style "M" automatic feeding your press can easily produce 9,000 stampings an hour at 200 strokes per minute, or 4,600 stampings an hour at 100 strokes per minute.

FOR VERSATILITY . . . Style "M" feeds left to right, right to left and front to back. Feed direction can be reversed by simply reversing clutch. Feed lengths per stroke are 0 to 4⅜" with standard gears and 0 to 8½" with compound gears.

FOR ADAPTABILITY . . . Style "M" is adaptable to any standard punch press. It feeds coil stock up to 8" wide and up to .055" thick (17 gauge).

FOR SAFETY . . . Style "M" automatic feeding keeps hands and fingers away from danger, prevents costly accidents.

FOR DURABILITY . . . Style "M" is built with hardened and ground feeding rolls and the other quality features that have made Littell Roll Feeds accurate and durable since 1918.

FOR ECONOMY . . . Style "M" brings you a big saving in price. It gives your presses the lowest insurance rate. It cuts your cost per stamping by multiplying press output.

WRITE FOR CATALOG

District Offices: Detroit, Cleveland

F. J. LITTELL MACHINE CO.
ROLL FEEDS • DIAL FEEDS • STRAIGHTENING MACHINES • REELS • AIR BLAST VALVES
4169 N. RAVENSWOOD AVE. • CHICAGO 13, ILL.

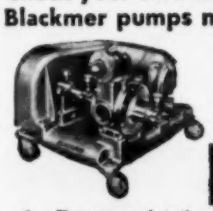
▲ For more details circle NED-1168 on enclosed inquiry slip ▲

PUMPING ALKYD RESINS & VARNISHES IN WEST COAST PAINT PLANT. INSTALLATION BY PACIFIC COAST ENGINEERING COMPANY.

"Why **CARRY** *materials that* **FLOW?"**

BLACKMER PUMPS are cutting materials handling costs in this and many other plants pumping liquids varying from naphtha to tar.

Check your own liquid materials handling costs NOW. Blackmer pumps may be YOUR ANSWER.



Get "FACTS" about Rotary Pumps

Write for "FACTS" about Rotary Pumps. See why these pumps save money for owners.

BLACKMER PUMP COMPANY
GRAND RAPIDS, MICHIGAN

▲ For more details circle NED-1169 on enclosed inquiry slip ▲

UNIFORM

KESTER FLUX-CORE SOLDER

UNIFORM **in Alloy and Flux-Content**

Right down the line, pound after pound, spool after spool, Kester has these features of *uniformity,* so necessary to the best in soldering!

Free Technical Manual: Send for your copy of "SOLDER and Soldering Technique" today.

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, New Jersey • Brantford, Canada

KESTER SOLDER

For more details circle NED-1170 on enclosed inquiry slip

LOW PRESSURE RELIEF VALVE

Positive Control at 7-10 p.s.i.

New ANDAL type C-13 relief valve assures positive, accurate control of gases and vapors at pre-set range of 7 to 10 p.s.i. Sturdy construction, compact design, noncorrosive parts, and standard pipe thread fittings make unit adaptable to wide range of applications. It withstands government salt spray tests. Various type mountings and constructions can be supplied.

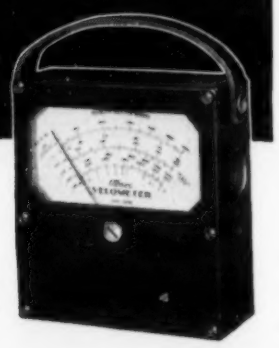
Write today for catalog

436-AA

ANDREWS-ALDERFER COMPANY
1102 HOME AVE.
AKRON 10
OHIO

For more details circle NED-1171 on enclosed inquiry slip

READ AIR VELOCITIES
instantly... accurately... anywhere...



...WITH THE

ALNOR VELOMETER

Alnor Velometer, a precision-built, self-contained, portable instrument, gives you instant, *accurate* readings of air velocities anywhere—in plants, mines, mills or laboratories. Measures speed of air flow through ducts, grilles, furnaces, spray booths or in the open. This rugged instrument needs no special care or delicate handling—anyone can use it and get accurate readings. Needs no calculations or reference charts. Available in a wide variety of scale ranges, and with a full assortment of jets and fittings for every application. You'll want full details and prices, so write for Bulletin 2448-G, Illinois Testing Laboratories, Inc., Room 529 420 No. La Salle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-1172 on enclosed inquiry slip

CAR ICE STACKER
mounted on highway truck, it transfers ice to railroad cars

Trains need not be broken up to shunt refrigerator cars to fixed icing stations if use is made of this car ice stacker. Mounted on any highway truck directly behind cab and run alongside car, stacker facilitates quick transfer of ice to waiting refrigerator units. Stacker carriage floor is flush with and serves as part of truck body floor to allow sliding of ice onto lifting carriage.

Lifting is accomplished by hydraulic pump connected to power take-off and hydraulic lifting ram controlled by balanced spool valve. This valve is controlled from safety-tread catwalk on either side of carriage as operator rides up with ice load. Control handles are also supplied on stationary part of machine so man standing on running board can raise or lower stacker carriage. Stacker is double telescopic type and is made in 2000-lb and 5000-lb capacities. Locking ramps on each side of lifting carriage keep ice in position during elevation and also serve as transfer bridge. Made by **Lewis-Shepard Products Inc.,** 190 Walnut St., Watertown 72, Mass.

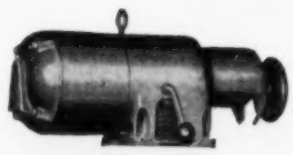
For more details circle NED-1173 on enclosed inquiry slip

CHEMICAL FIRE EXTINGUISHER
applicable to oil and electric fires

Designed for installation on diesel and turbo-electric locomotives, chemical fire extinguisher is capable of storing and expelling 150 lb of dry chemical comprised mainly of treated sodium bicarbonate. Chemical is highly effective against fires of flammable liquids and electrical equipment. Hose lines running up to 100 ft in length allows train crew to reach any fire within few seconds. Welded steel container which weighs about 475 lb when charged is pressurized for use by opening nitrogen cylinder valve. Nitrogen, stored in 110-cu ft capacity cylinder, passes through pressure regulator into dry chemical tank. Dry chemical is supplied under pressure through outlet valve to hose and dispersed through 150 Dualstream nozzle, capable of discharging 170-lb of chemical a minute. Made by **Ansul Chemical Co.,** Fire Extinguisher Div., 1 Stanton St., Marinette, Wis.

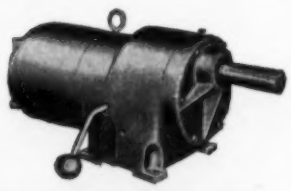
For more details circle NED-1174 on enclosed inquiry slip

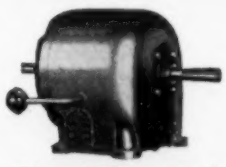
PUT LIMA DRIVES TO WORK FOR YOU



Types R3 & R3A—Built in ratings of 1 to 5 HP—Four constant horsepower selective-speeds.

Types R3C & R3AC—Selective primary and secondary gearing. 11 optional ratios. Ratings 1 to 5 HP.





Type RD—Motorless. Has four selective-speeds. Ratios 4, 2, 1.85 and 1 to 1. Input capacity 1 HP at 1800 RPM.

Lima Drives are built in a complete range of sizes from ½ to 15 HP with integrally mounted motors; Motorless drives to 25 HP capacity—a size for every need.

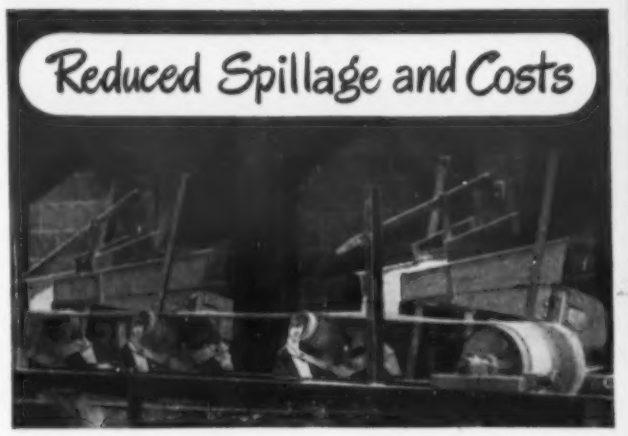
WRITE FOR LITERATURE

LIMA *Representation in principal cities*
GEARSHIFT DRIVES & MOTORS

THE LIMA ELECTRIC MOTOR COMPANY 341 Findlay Road • Lima, Ohio

For more details circle NED-1175 on enclosed inquiry slip

Reduced Spillage and Costs



These Syntron F-22 Feeders provide a smooth, even, controllable feed to belt conveyor in chemical plant. They eliminated material waste, manpower waste and processing delays due to surges and periods when material came "short".

SYNTRON
"Vibra-Flow"

VIBRATORY FEEDERS
With Variable Control of Rate of Flow

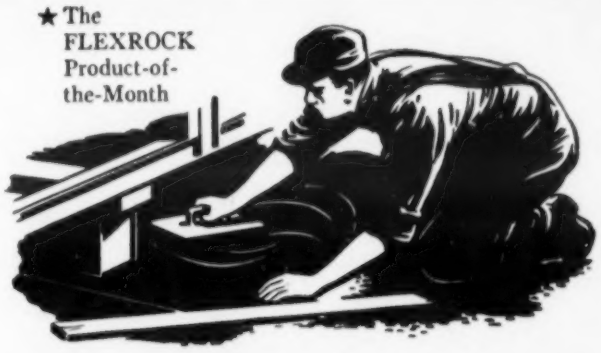
WILL HANDLE most all types of bulk materials—fine, lumpy, hot, cold, dry, damp, abrasive. AT variably controlled rates from pounds to hundreds of tons per hour. TO mixers, blenders, belts, ovens, crushers, screens, etc. WITH exceptionally low maintenance costs due to absence of motors, pulleys, eccentrics, cams and other wearing parts.

Write to—

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-1176 on enclosed inquiry slip

★ The FLEXROCK Product-of-the-Month



Continental Motors Corporation
MUSKEGON, MICHIGAN

is one of many industrial leaders that rely on

TROWEL-IN

for efficient floor repairs

Continental Motors uses ⅛" overlays of Trowel-In to resurface "problem" traffic areas at their Getty Street Plant, Muskegon . . . and has them ready for traffic in 18 hours!

That's only one use of this versatile industrial flooring material. Trowel-In makes true "feather-edge" patches on concrete, stone, composition, steel. Aids in leveling floors prior to laying linoleum or tile. Helps set floor plates and drains. Insulates against vibration!

Trowel-In requires no heat, no special skill. Trowels in easily around machine bases, floor plates, pipes, and other obstructions. The Trowel-In package is complete . . . Trowel-In, Primer, Dryer . . . nothing else to buy! For trial offer, mail the coupon now.

No chopping out of old floors—just clean and prime. Trowel-In will bond to a feather-edge.

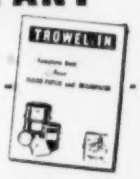
Mix Trowel-In materials direct from containers—no heating required. Then pour mix and spread.

Smooth with wood float; finish with steel trowel after initial set. Takes traffic in 18 hours.

Flexrock products for maintenance include

- Floor Resurfacing Materials
- Floor Patching Materials
- Floor Coatings and Preservatives
- Wall and Floor Cleaners
- Water-proofing and Moisture-proofing Compounds
- Roof Patching and Reconditioning Materials
- Concrete Admixtures

FLEXROCK COMPANY
PHILADELPHIA 4, PA.



FLEXROCK COMPANY
Building Maintenance Division
3603 Filbert Street, Philadelphia 4, Pa.

Please send me complete information on Trowel-In, with details of the Trial Order Plan.

Name _____

Address _____

Company _____

☐ Check here if you do not already have our 68-page Handbook of Building Maintenance and would like to receive a copy.

Please clip coupon to company letterhead.

For more details circle NED-1177 on enclosed inquiry slip

Faster, HEAVY DUTY Milling on STEEL and CAST IRON

The "KF" Face Kennamill features long-lasting, solid Kennametal blades securely locked into position by easily-accessible stud-type, heat-treated alloy steel wedges that can be pulled up without movement of blades, and released without prying. Freeze-proof—no threads in body! Blades and wedges are interchangeable—fit any slot in this precision-built cutter.

Suitable for faster, lower cost production milling on steel, and heavy duty milling on cast iron. For complete particulars, write for Catalog 51—Supplement 2.

KENNAMETAL Inc.,
Latrobe, Pa.
MANUFACTURERS OF SUPERIOR CEMENTED CARBIDES AND CUTTING TOOLS THAT INCREASE PRODUCTIVITY

For more details circle NED-1180 on enclosed inquiry slip

AJUSTRITE
TRADE MARK

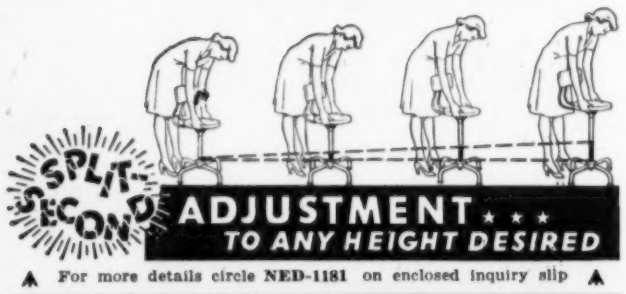
AUTOMATIC ADJUSTABLE STOOLS

Ajustrite (formerly Kewaunee) adjustable stools and chairs are used extensively in Factories, Laboratories, Hospitals, Offices, Schools, Colleges and Government Agencies. User adjusts to any desired height—instantly.

Choice of 7 models. Height adjustment 15" to 20"; 18" to 26". May be equipped with adjustable back rest, foot rest, seat cushion.

Write for literature and free trial offer.

AJUSTO EQUIPMENT CO.
2144 Madison Avenue Toledo 2, Ohio



For more details circle NED-1181 on enclosed inquiry slip

"PAID FOR ITSELF ON ONE JOB!"

Foredom FLEXIBLE SHAFT MACHINES

have many time-saving applications but users often find a Foredom REPAYS ITS COST on ONE JOB through eliminating an expensive disassembly and re-set job on such tasks as removing high spots on gears and touching up tools or cutters in a production set-up. The secret's in Foredom's extra small handpieces which handle like a pencil and penetrate into spots inaccessible for other tools.

Indispensable for "SMALL WORK" GRINDING AND FINISHING JOBS

Foredoms are profitable additions to ALL 3 departments—Production, Tooling and Maintenance. 5 HANDPIECE TYPES (all instantly interchangeable) produce versatility to a marked degree.

SPOT THEM LIBERALLY ABOUT THE PLANT for emergency and every-day use. Their cost is negligible. Prices start at $17.75.

Quality Tested Since 1922

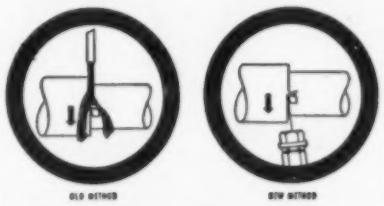
SEE YOUR INDUSTRIAL SUPPLY DISTRIBUTOR. IF HE CANNOT SUPPLY YOU WRITE TO US. MAIL COUPON FOR CATALOG.

FOREDOM ELECTRIC CO., Dept. 5251
27 Park Place, New York 7, N. Y.
Send your catalog No. 5251, showing different uses of Foredom Flexible Shaft Machines. Name ..... Address ..... City & Zone ..... State .....

For more details circle NED-1182 on enclosed inquiry slip

METAL CUTTING TECHNIQUE
high speed jets of oil are directed under tool between edge and work

Promising to increase metal cutting tool life from 300 to 1200 per cent, combination of Hi-Jet oil and Hi-Jet system will be available on commercial basis about July 1, 1952. Small high speed jets of oil are directed from below the tool, and streams pass through space between the work and side relief face of the tool and are aimed at the line of contact between the work and the cutting edge. Part of the oil is forced past the cutting edge and is caught between the chip and the tool. Thus, efficient lubrication is obtained and heat transfer away from the cutting edge is improved.



System consists of jet or series of jets, flexible tubing and small pump capable of providing pressure of 400 psi. Equipment can be installed easily on machine tools and is applicable for most operations using single point tools. Over 600 tests have been conducted over the past year on metals ranging from SAE-1020 to titanium. Increased life of 6 to 12 times on high speed tools and 3 to 5 times on carbide tools are reported. Additional advantages are improved surface finish, dimensional accuracy and, in some cases, elimination of need for additional finishing operations.

Required in some cases are smoke quenching attachments. These flood the cutting area and minimize smoke which develops at cutting point because of large amount of heat which is carried away by the Hi-Jet. System will be manufactured under license by Thompson Products, Inc., Cleveland. Developed by **Gulf Oil Corp.**, Dept. 7, Gulf Bldg., Pittsburgh 30, Pa.

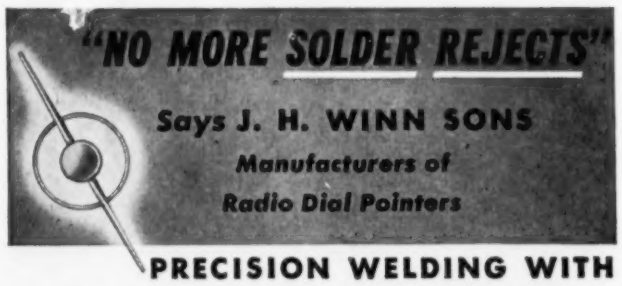
For more details circle NED-1183 on enclosed inquiry slip

GAS-FIRED KETTLE
sanitary unit is self-contained

Preparation of foods and other products requiring cooking is facilitated with this Wear-Ever aluminum gas-fired kettle. Heat from Pyrastove burner is applied directly to heavy-gage aluminum shell which spreads heat evenly and quickly to assure cooking at proper temperature and with minimum of shrinkage. Kettle is offered with two types of removable inside containers. One has convenient lift-out handles and smooth rounded bottom for easy stirring. Other is equipped with tangent draw-off and easy-to-clean valve. One-piece hinged cover is standard. Burner can be turned down to less than 10 per cent of maximum input without flashback. Alloy construction is used for corrosion prevention and lightness in weight. Made by **Aluminum Cooking Utensil Co.**, Dept. NED-1, Fifth Ave. & Eleventh St., New Kensington, Pa.

For more details circle NED-1184 on enclosed inquiry slip

"NO MORE SOLDER REJECTS"

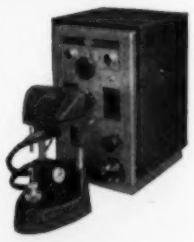


PRECISION WELDING WITH
RAYTHEON WELDPOWER* UNITS
Cuts Rejects, Eliminates Expensive Solder

"Soldering and other assembly defects sometimes spoiled up to 80% of our production," says J. H. Winn Sons, Winchester, Mass. *"Changing to precision welding with Raytheon Weldpower* Units cut out completely all soldering rejects and at the same time eliminated the need for scarce and costly solder."*

Ask us to show *you* how Raytheon Condenser Weldpower can improve production of small parts involving assembly of non-ferrous or dissimilar metals. Send sample parts and details . . . or write for complete information.

*Reg. U. S. Pat. Off. Address Dept. NE-2



Raytheon Condenser Weldpower Control Units are available in three sizes and with appropriate Weldpower Heads.

RAYTHEON
Excellence in Electronics
RAYTHEON MANUFACTURING COMPANY
Equipment Sales Division, Waltham 54, Mass.
DISTRICT OFFICES: Boston • New York • Cleveland
Chicago • New Orleans • Los Angeles • San Francisco • Seattle

For more details circle NED-1185 on enclosed inquiry slip

WAR SURPLUS SAVINGS

SAVE UP TO 85% ON TOOLS—MACHINERY AND PARTS!!
1952-230 PG. CATALOG

Our latest & biggest CATALOG of NEW and SURPLUS BARGAINS. Thousands of items at UNHEARD OF LOW PRICES! SAVINGS UP TO 85% in Hand & Power Tools, Electrical Supplies, Industrial Machinery, Gas & Electric Motors, Winches, Hoists, Machine Tools, Gauges, Welding Equipment, Pneumatic & Air Tools, Raw Stocks, Aluminum, Brass, Copper & Steel in Sheets, Bars, Rods, Tube & Extrusions, Nuts, Bolts, Rivets, Screws, Wire, Cable & a Huge Stock of HYDRAULIC SUPPLIES including Cylinders, Valves, Pumps, Motors, Fittings, Tubing, etc. While these items last we will continue to sell them at typical low Palley Prices. WRITE TODAY FOR YOUR COPY!

Stationary or Portable ARC WELDER — 97.50
Delivers 300 Amps., continuous—or 350 to 400 Amps., intermittent: Designed to weld continuously for hours . . . This unit is built around a rugged, heavy duty, aircraft type generator and comes complete with pulley reactor, output controls, switches and & rheostat mounted on sturdy steel frame. Operates on 15 H.P. for maximum output. Gas or electric motor. For light or heavy industrial work.

HYDRAULIC PUMP & CYLINDER SPECIALS

Hyd. Variable Displacement PUMP — 32.50
Will deliver maximum volume at any pressure setting between 600 and 900 P.S.I. Pump housing serves as reservoir for system. Has built-in compressed air super-charger which makes system independent of outside atmospheric pressure. Rotation is left hand only. Maximum speed for continuous duty is 3750 R.P.M. Displacement is .484 cu. in. per revolution, or approximately 4 G.P.M. at 1750 R.P.M.

Special! HYDRAULIC CYLINDER — 29.95
Gives 20,000 lbs. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lbs. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for road-form—shop machinery-etc.

P-3 STRATO POWER PUMP — 19.50
With built-in variable flow control valve in head. Positive displacement piston type. Displacement capacity: 2 gal. per min. at 1500 RPM or 1250 PSI. Pressure limit 1250 PSI continuous. 1400 PSI for 15 sec. Operates at 3750 RPM, intermittent max. 4500 RPM. Rotates either direction without adjustment.

No. 3 HYDRAULIC CYLINDER — 5.75
Double action. Bore is 1" — Shaft ½". Has stroke of 2½" to 4". Stroke can be adjusted with internal sleeve stops. Overall length is 8½". Will take 1500 lbs. continuous duty. 3000 lbs. intermittent. Will lift or push up to 1100 lbs.

P-4 VICKERS ANGLE PUMP — 19.49
Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI., continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum, 4500 RPM. Rotates to the right only.

FOUR WAY VALVE — 9.75
Poppet type. Pressure balanced. Off at neutral position. Piston type with built-in relief valves for limit of cylinder strokes. 5/8" AN tube size (7/8"-14 thread) inlet & outlet. Ports to cylinder are 1/2" AN tube size 3/4"-16 thread).

PALLEY SUPPLY CO.
DEPT. NED-2
6321 SAN FERNANDO RD.
GLENDALE 1, CALIF.

Order from this ad. All sales final. All prices F.O.B., Glendale. Pay by M.O. or check. P.O.'s accepted from D.&B. firms. ½ deposit with C.O.D.'s.

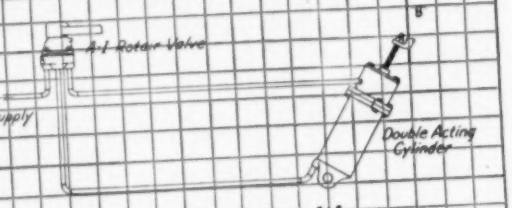
For more details circle NED-1186 on enclosed inquiry slip

Ideas for Engineers

INDUSTRIAL PRODUCTS DIVISION — WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Datair Sheet #3

EQUIPMENT: Sheet Metal Brake



APPLICATION: Operate Sheet metal brake "A". A-1 Rotair valve controls double acting cylinder which operates brake leaf "B". "Lap" feature permits the lifting of leaf "B" and stopping of operating cycle to check alignment before completing bending operation.

SOLUTION: Westinghouse A-1 Rotair Valve and Westinghouse Double Acting Cylinder installed.

RESULT: Manual foot operation of brake eliminated. Operator provided with complete control of device through complete cycle of operation. Production increased. Accuracy of work improved.

And, again AIR Solves the Control Problem!

Here's another example of a Control Problem—quickly and practically solved through the use of W A B Pneumatic devices. Thousands more can be solved just as quickly through different applications and combinations of W A B equipment. Our Engineering Data File will provide you with some practical cases. Sections of it may apply to your problems. Write for your copy. No cost to you.

FREE
This Engineering Data File
WRITE

INDUSTRIAL PRODUCTS DIVISION — WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Factory Branch: EMERYVILLE, CALIF.
Distributors throughout the United States . . . Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

For more details circle NED-1187 on enclosed inquiry slip

Noise Reduced 50%*

inside a BURGESS-MANNING Acousti-Booth

- Hushed interior . . . a quiet restful place to hear well.
- Light, sturdy construction for ease of moving.
- Doorless construction...light, airy, well ventilated...easy to keep clean.
- Simple construction . . . no moving parts—therefore, easy to maintain.
- Modern in appearance. Suited to any location.

Model 602 Wall Booth

Model 211 Floor Booth

*Based on studies by a prominent research organization.

Write for Bulletin 103A

BURGESS-MANNING COMPANY

Architectural Products Division

5970-C Northwest Highway, Chicago 31, Illinois

For more details circle **NED-1188** on enclosed inquiry slip

FROM THE TEST TUBES OF THE FULLER RESEARCH LABORATORY

Fuller has called on modern chemistry to fill in the chinks in Nature's processes. Take gloss, for example. Fuller's modern research laboratory has developed a new method of crystallization control which permits Fuller Floor Waxes to hold gloss longer, yet remain extremely durable to wear. Water resistant—yet easily removed with *soap* and water. Anti-slip—yet not tacky.

Also: Fuller Furniture Polish, Metal Polish and All-Purpose Cleaner. For more information, write to . . .

Fuller

SHIPPED FROM NINE DISTRIBUTION POINTS

INDUSTRIAL DIVISION FULLER BRUSH

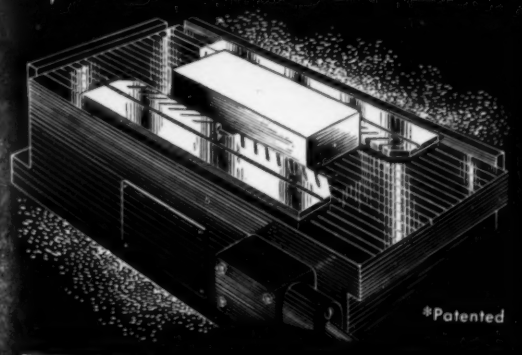
At home... in business, too

3530 MAIN STREET
HARTFORD 2, CONN.
IN CANADA: FULLER BRUSH CO., LTD., HAMILTON, ONT.

For more details circle **NED-1189** on enclosed inquiry slip

Magna-Vise*

. . . INCREASES THE VALUE OF YOUR MAGNETIC CHUCKS
. . . ENABLES THEM TO HOLD *any* rigid non-magnetic material



*Patented

Get full details on this revolutionary shop-proved device . . . write Dept. ND-22

Hanchett MAGNA-LOCK CORPORATION

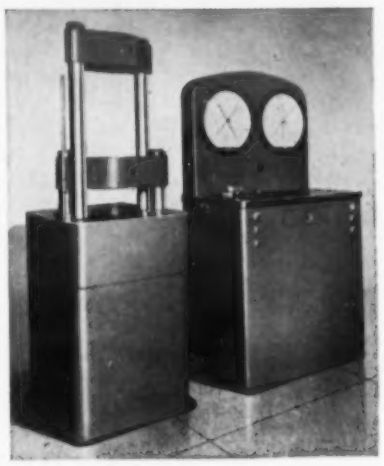
Magna-Lock

Magnetic Chucks and Devices

BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle **NED-1190** on enclosed inquiry slip

UNIVERSAL TESTING MACHINE offered with six ranges and 120,000-lb maximum capacity



By having hydraulic loading unit separate from indicating and control unit, recoil from breaking test specimens on improved model 120-H universal testing machine is isolated. This feature also permits adjusting maximum or lazy hands with minimum drag. High rigidity provided in two-column design, and 15-in. of clear lateral space between columns gives easy access to test specimens and simplifies observations.

Load, either in tension or compression, is applied upward by integrated piston and elevating cage consisting of table, two uprights and upper gripping head, all with 6-in. power stroke. Loading speed is infinitely variable between 0 and 2 ipm. Vertical distance between gripping heads for tension tests or between platens for compression tests can be set anywhere from 1 to 24 in., the latter including the stroke. Two ranges, 0-120,000 and 0-30,000 lb, are standard. Any two of six ranges, 0-6000, 0-12,000, 0-24,000 and 0-60,000 lb, are available at extra cost. Three ranges can be provided when required. Announced by **Baldwin-Lima-Hamilton Corp.**, Dept. T. E., Philadelphia 42, Pa.

For more details circle **NED-1191** on enclosed inquiry slip

LIGHT DUTY ELECTRIC TRACTOR tows loads weighing up to 10 tons

Designed to speed materials handling operations, lightweight model FTE electric tractor combines controls at rear so that driver can get on and off easily. Auxiliary controls on each side permit operator to walk the vehicle from the side when movement of only a few feet is required, such as on order pick-up service. Weighing 1500 lb, tractor can tow 10-ton loads over normal grades.

When riding, operator stands on rear platform and controls unit with conventional direction switch and foot pedal which combines brake and speed controls. Designed to work in cramped quarters, this battery operated tractor turns in trifle more than its own length of 52 in. Made by **Automatic Transportation Co.**, 149 W. 87th St., Chicago 20, Ill.

For more details circle **NED-1192** on enclosed inquiry slip

CUT COSTS . . . SPEED PRODUCTION

BRADY STOCK QUIK-MASKS®

MOUNTED ON CARDS for

- **PAINTING** • **PLATING**
- **TUMBLING** • **BUFFING**

Protect machined parts, name plates, holes, threads, designs, etc., during finishing operations. Eliminate slow, costly hand cutting of masks and stencils.

Self-adhesive Brady QUIK-MASKS are pre-cut to sizes and shapes you need. They come mounted on handy dispenser cards or individual liners for speedy application. You just *peel, press, protect.* Hi-Heat resistant to 300° F. Quickly removed after baking without residue. Squares, circles and rectangles in all standard production sizes available from stock. Specials made to your exact requirements. Send for FREE samples and idea-packed literature.

WIRE MARKERS
PIPE MARKERS
SAFETY SIGNS
PRINTED "SCOTCH" TAPE
MASKS & STENCILS

MANUFACTURERS OF SELF-STICKING PRODUCTS

W. H. BRADY COMPANY

EST. 1914

1663 E. SPRING STREET • CHIPPEWA FALLS, WIS.

For more details circle **NED-1193** on enclosed inquiry slip

"MY MEN WANT BLACKHAWK BENDERS"

"MY MEN LOVE THAT REMOTE CONTROL! With the hydraulic pump and ram separated by a flexible hose, a man can move around — 'jockey' the pipe with one hand — sight along it if necessary . . . without stopping the pumping.

"It's just plain handier, and a Blackhawk costs me nothing extra. Works in any position — on its side or upright — on table or floor — on existing runs. So naturally, I give my men exactly what they want to make their job easier, and cut my own costs on both rigid and thin-wall conduit." **Blackhawk Mfg. Co., Dept. P-1422, Milwaukee 1, Wis.**

Write for free Bulletins 508 and P50 on all Blackhawk Electrician's Equipment. Buy from leading supply houses.

BLACKHAWK

HYDRAULIC *Porta-Power* EQUIPMENT

For more details circle **NED-1194** on enclosed inquiry slip

ACCURATE

Low Cost Temperature Control

for Jacket Water and Lube Oil

POWERS

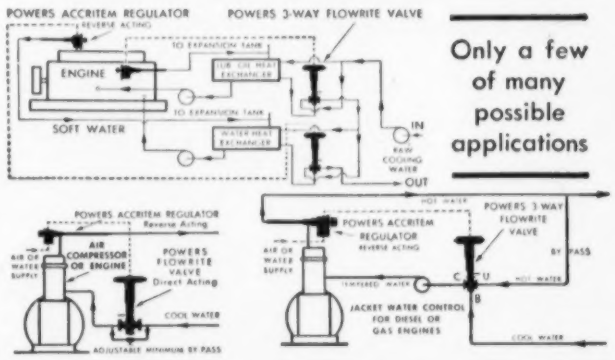
Compressed Air or Water Operated

ACCRITEM REGULATOR

Unsurpassed for reliability and power to operate large or small size 3-way or 2-way diaphragm valves for accurate control of jacket water and lube oil cooling temperatures.

IMPORTANT ADVANTAGES

- ***Adjustable Sensitivity*** and over-heat protection.
- ***Calibrated Dial*** temperature adjustment.
- ***Simple, Rugged Construction*** withstands vibration and insures many years of reliable service.
- ***Temperature Ranges*** 50 to 250° F. and 150 to 350° F.
- ***Easy to Install.*** Requires 15 lb. supply of compressed air or water for its operation.
- ***Small Size***—regulator head is only 2⅞" x 3⅝", sensitive bulb is 12" long with ½" I.P.S. connection.



Only a few of many possible applications

POWERS FLOWRITE DIAPHRAGM VALVES controlled by Powers ACCRITEM Regulators provide an unbeatable combination for better control and lower maintenance.

Write for Bulletin 316 (a62)

THE POWERS REGULATOR CO.

3440 Oakton Street, Skokie, Illinois • Offices in Over 50 Cities

60 YEARS OF WATER TEMPERATURE CONTROL

For more details circle **NED-1195** on enclosed inquiry slip

Wherever an ACORN NUT is indicated

—slash your fastening costs with

PALNUT TRADEMARK **ACORN SELF-LOCKING NUTS**

- *Self-locking action holds tight under vibration*
- *Eliminates lockwashers*
- *Priced lower than ordinary acorn nuts*

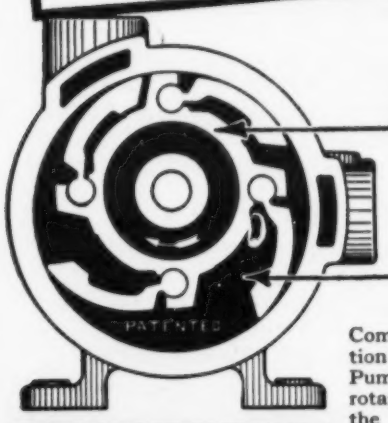
ON light assemblies now using ordinary cap or acorn nuts, you save money and get a quick, secure fastening by changing to PALNUT Acorn Self-Locking Nuts. They are pleasingly dome shaped and have the famous PALNUT double-locking action that defies vibration. Very low in cost—light in weight—easily, speedily applied—cover rough, unsightly bolt ends, eliminate catching or scratching. Send details of application for free samples and further information.

The Palnut Co., 45 Cordier St., Irvington 11, N. J.
In Canada: P. L. Robertson Mfg. Co., Ltd., Milton, Ontario

PALNUT TRADEMARK SELF-LOCKING NUTS AND FASTENERS
for quick, secure fastening at low cost

▲ For more details circle **NED-1196** on enclosed inquiry slip ▲

LEIMAN AIR PUMPS GIVE YOU *Greater Capacity!*



SMALLER PISTONS *provide* LARGER AIR SPACE

HINGED WINGS *take up their own wear*

Compare this cross-section of a Leiman Air Pump with any other rotary air pump. It is the working air space that counts—and Leiman provides 2 to 3 times more area, per size and weight of pump.

Handle air pressure, vacuum or suction jobs with much smaller Leiman Rotary Air Pumps. You save weight and space—run at lower r.p.m.—have fewer moving parts—no springs, gaskets or packings—no tips to renew—nothing to give trouble. Leiman patented leak-proof hinged wings maintain fully-rated pressure or vacuum for years and years.

what is your air application?

Send us details. Leiman engineers offer over 60 years' experience with thousands of air applications. Catalog and Application Data sent on request.

For Pumps—write DEPT. A

LEIMAN *Rotary* **AIR PUMPS** (Pressure—Vacuum)

Metal Cleaning and Finishing without acids or scratch brushes

Fast, low-cost, safe, uniform!

LEIMAN SANDBLASTS

Clean up scaly, rusty, rough surfaces—prepare better surface for plating, enameling or painting—stencil letters and designs—more rapid matte or satin finishes. Use unskilled help. Many models, treadle or automatic.

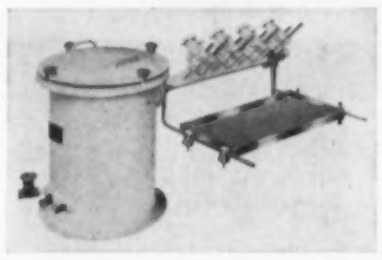
For Sandblasts—write DEPT. B

LEIMAN BROS., Inc. 167 Christie Street, Newark 5, N. J.

AIR PUMPS • AIR MOTORS • SAND BLASTS • DUST COLLECTORS

▲ For more details circle **NED-1197** on enclosed inquiry slip ▲

FREEZE-DRYING UNIT
run capacity is 200 milliliters



Drying capacity of model 102 freeze-drying unit is 200 milliliters per run. Desiccant need not be regenerated until 800 milliliters of water have been absorbed. Materials usually handled in small quantities in research laboratory can be dried in unit. Eight-port manifold has separate valve on each port to permit aseptic sealing of containers under secondary vacuum. Triple connectors permit handling 24 containers at one time. Unit will handle one 250 milliliter bottle. Made by **F. J. Stokes Machine Co.,** 5900 Tabor Rd., Philadelphia 20, Pa.

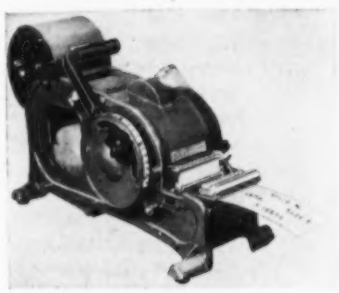
▲ For more details circle **NED-1198** on enclosed inquiry slip ▲

STORAGE CABINET
for radioactive samples

Provision for replacing sample holders or sample holding tray in case of contamination is incorporated in model N4 storage cabinet for radioactive samples. Sample holders are plastic cups which are pressed into holes in tray. Cups can be replaced at little cost if contamination occurs. Cabinet has 10 drawers, each with ten sample holders. Plastic sample holders permit almost any size sample to be held. Each sample within drawer is numbered. Dust-tight cover can be placed over cabinet to eliminate possibility of sample contamination. Made by **Nuclear Instrument & Chemical Corp.,** Dept. NED, 229 W. Erie St., Chicago 10, Ill.

▲ For more details circle **NED-1199** on enclosed inquiry slip ▲

TAPE DISPENSER-CODER
both operations are simultaneous



Selected information is imprinted on sealing tape during exact interval when tape is being discharged from Data Tapeshooter dispenser. Information can identify contents, packers, inspectors or production, packing and perishable dates. One stroke is required to measure, moisten, dispense, cut and code tape automatically. Easy-to-change rubber type is used. Available for printing 3-in. width tape, dispenser can be adjusted for printing 1½, 2 or 2½-in. widths, either from type or printing mats. Quick-drying ink is available for coding in one color or any combination of black, blue, purple, red, green or brown. Made by **Better Packages, Inc.,** Dept. NED, 255 Canal St., Shelton, Conn.

▲ For more details circle **NED-1200** on enclosed inquiry slip ▲

AIR VIBRATOR
moves wide range of materials

TYPE F

The CLEVELAND Type F Air Vibrator, illustrated herewith, is one of the basic types used in moving, settling or packaging a wide range of materials.

It is made in 6 sizes, from 1¼" piston diameter to 4" piston diameter, capable of handling materials from the smallest chute, bin or hopper to the largest of bulk storage bins.

The Type F Air Vibrator can move steel chips; dry colors; concrete; and fertilizer. It works equally well on sand, coal and soap; chipped ice and meat; wood chips; and almost any other material which is inclined to plug up, arch or bridge.

The Type F is easily installed by mounting or bolting through the skin of the hopper and a reinforcing plate. This distributes the impact of the vibration over a wider area and prevents distortion of the hopper skin.

An air-cushioned semi-noiseless type is available where NOISE is a factor.

BIN Stuck Lately? Catalog No. 105 will give you further details. **The Cleveland Vibrator Co.,** 2745 Clinton Avenue, Cleveland 13, Ohio. Advt.

▲ For more details circle **NED-1201** on enclosed inquiry slip ▲

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

▲ For more details circle **NED-1202** on enclosed inquiry slip ▲

Now! INDUSTRIAL DOORS PACKAGED! for erection by your own maintenance men.

Easy operating **CLARK PREST-O-MATIC** *FOLDING or SLIDING* **DOORS** *with* **AUTOMATIC CONTROLS**

Prevent drafts SAVE HEAT...

. . . and provide fatigue-free access between buildings or departments. Approach-control and specially designed mechanism assures swift and smooth operation. NO FITTING or ALTERATIONS! Prest-o-matic Doors fit against walls; leave full width of entrance; avoids need for costly fitting or fussing.

write for Catalog!

FULLY GUARANTEED

Opens or closes in 3½ seconds. With simple instructions for erection, these doors can be set up within 2 hours.

CLARK DOOR COMPANY
511 Hunterdon Avenue, Newark 8, N. J.

▲ For more details circle **NED-1203** on enclosed inquiry slip ▲

Repair CRACKED CONCRETE FLOORS

When your concrete floors develop cracks, ruts, shallow holes or rough spots, repair them with Smooth-On No. 7B Quick Floor Patch Cement. It comes in powder form ready to mix with water. Simply apply Smooth-On No. 7B as you would plaster. Smooth-On No. 7B expands slightly as it hardens, insuring a secure, tight fit. You get an iron-hard surface that can take the punishment of heavy traffic. Order Smooth-On No. 7B Quick Floor Patch Cement in 1, 5, 20, or 100 lb. size.

FREE ***Folder and Repair Handbook***

Write for your copy of the illustrated Smooth-On Quick Patch folder and the famous Smooth-On Repair Handbook. Pocket size, 40 pages, 170 simple illustrations. Shows how to make many time-saving, money-saving repairs.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.

SO-349

Do it with **SMOOTH-ON**
QUICK FLOOR PATCH CEMENT

▲ For more details circle **NED-1204** on enclosed inquiry slip ▲

BREEZE Job-Engineered BELLOWS

...Give LASTING PROTECTION Where Ordinary Bellows Fail

Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC.
41-V S. Sixth St., Newark 17, N.J.

OTHER BREEZE PRODUCTS: ACTUATORS - RADIO SHIELDING - AERO-SEAL HOSE CLAMPS

▲ For more details circle **NED-1205** on enclosed inquiry slip ▲

ALLIS-CHALMERS Totally-Enclosed Fan-Cooled MOTOR

Get the Motor that Cleans Itself

MOTOR CLEANING operations are reduced . . . maintenance costs are lower than ever before with the new Allis-Chalmers tefc motor. Here's why! Concealed air passages have been eliminated; dirt cannot build up to cause overheating. Cooling air is blown over the ribbed cast iron frame and bearing housings — carrying dirt away with it. Oily dirt that sticks can be wiped or blown off.

This new motor built in all NEMA standard frame sizes from 224 to 505. Also in explosion-proof type. Get Bulletin 51B6144 from your A-C Authorized Distributor or District Office, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3463

ALLIS-CHALMERS A-C

▲ For more details circle **NED-1206** on enclosed inquiry slip ▲

ARMSTRONG-BRAY
GEAR and WHEEL PULLERS

Quickly and easily pull gears, wheels, pulleys and bearings off of shafts without damage or breakage.

Improved designs make them easy to set up and safe in use—the harder the pull the tighter the grip.

12 types, 40 sizes—2-arm, 3-arm, standard and special STEELGRIP Pullers with drop forged arms and heat treated screws as well as CHAINGRIP Universal Pullers that reach to considerable distances from end of shaft.

Write for Catalog

ARMSTRONG-BRAY & CO.
5362 NORTHWEST HIGHWAY
CHICAGO 30, U.S.A.

▲ For more details circle **NED-1207** on enclosed inquiry slip ▲

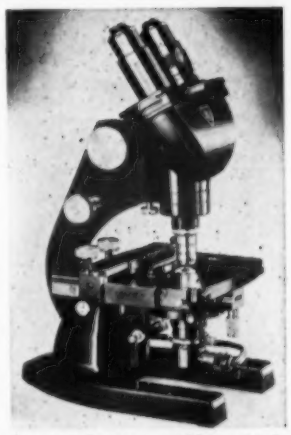
SIGHT-FLOW INDICATOR
allows visual examination of fluids in piping systems

Designed for checking flow of fluid in process piping systems and for visual examination of fluid, Twin-Vue flow indicator has two windows located on opposite sides for maximum visibility. O-ring gaskets and Truarc retaining rings provide positive seal around window and become tighter under pressure up to 2000 psi or vacuum. Indicators are fabricated of extra heavy wall forged tubing with Van Stone lap joint stub ends welded into side of body. Design permits use of stock size tubing, as well as steel flanges rather than flanges of special materials.

Indicators are available in sizes ranging from ½ to 4 in. and in the following materials other than steel: nickel, Hastelloy B or C, and rubber-lined Monel. Pressure ratings range from 350 to 50 psi with Pyrex to four times that with Herculite windows. Herculite or quartz are available on order. Made by **Trinity Equipment Corp.**, 475 Westfield Ave. E., Roselle Park, N. J.

▲ For more details circle **NED-1208** on enclosed inquiry slip ▲

DARK FIELD MICROSCOPE
light illuminates specimen from all sides, but does not enter objective



Latest AO Spencer mechanical features and improved illuminating system are incorporated in this dark field microscope which finds most practical application in medical, industrial and public health laboratories. Micro particles of a refractive index and color similar to medium in which they exist are readily visible. Specimens are made luminous and visible by cone of light striking them from all sides at angle to avoid entering objective. Light source is centerable in relation to condenser optics, and condenser is quickly adjustable for slide thickness from 1.15 to 1.25 mm. Special 97X oil immersion objective is supplied with built-in iris diaphragm to eliminate need for funnel stop.

Either monocular or binocular instruments are available, and both have hinged substages that open to facilitate cleaning. Pinchgrip mechanical stage allows slide interchanging without disturbing stage settings. Adjustable tension gives precise control over degree of firmness in focusing mechanism. Constant ratio lever insures accuracy of 2 micron scale throughout focusing range. Binocular bodies are lightweight, dustproof, dust shedding and have inclined converging eyetubes for comfortable posture and reduced eyestrain. Made by **American Optical Co.**, Instrument Div., Dept. 0000, Sugar & Eggert Rds., Buffalo 15, N. Y.

▲ For more details circle **NED-1209** on enclosed inquiry slip ▲

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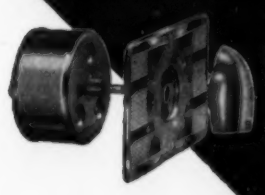
specify the MARK-TIME "9100" TIME SWITCH for ACCURACY, DEPENDABILITY, ECONOMY!



Manufacturers of equipment requiring automatic delayed action timing can rely on Mark-Time 9100-Series time switches to do the job.

Mark-Time simplicity of design means fewer parts and fewer possibilities of failure. The sturdy, spring operated mechanism free from power variations is set and wound in one operation.

A model giving an audible bell signal is available.

Wide variety of modern dial and knob designs.

Write for further details and prices.

first where quality counts

MARK-TIME 9100-SERIES TIME SWITCH
U.L. approved for 5 amperes, 125 Volt A.C. operation.
Normally supplies for Center Stud mounting; other mountings available on request.
Timings from 1 minute to 5 hours.

M. H. RHODES, INC. MARK-TIME
HARTFORD, CONNECTICUT

In Canada send inquiries to: Ontario Hughes Owens Co. Ottawa, Ontario

▲ For more details circle **NED-1210** on enclosed inquiry slip ▲

This year hundreds of thousands of workers will work faster, more accurately and in greater comfort because the plants they work in are heated with WING REVOLVING UNIT HEATERS

Do you, too, want to work in comfort? Write for Bulletin HR-6

L. J. Wing Mfg. Co., 165 Vreeland Mills Rd., Linden, N.J.

WING

REVOLVING UNIT HEATERS
VENTILATING FANS
DUCT FANS
TURBINES
BLOWERS
DRAFT INDUCERS
MARINE VENTILATION

▲ For more details circle **NED-1211** on enclosed inquiry slip ▲

ROYAL®

put this camera to work and saved valuable development time

Parts in electric typewriters have a habit of moving too fast to see when you want to check for strain or yielding under pressure. In developing their machine, Royal Typewriter Co. engineers used the Kodak High Speed Camera to turn the blur of speed into clear pictures for rapid, visual analysis.

This versatile instrument takes up to 3200 pictures a second on 16mm film—slows motion as much as 200 times. Projected at normal speed, the films quickly and conclusively showed which parts were wrong—weeks of valuable time were saved over usual development procedures. In addition, the camera's built-in timing device simplified synchronization of components.

If you have a problem that's hidden by speed, the Kodak High Speed Camera may make the answer obvious. To find out more, send for your copy of the booklet, "Magnifying Time." It shows how others have solved their problems of design, production, and product performance. Eastman Kodak Company, Industrial Photographic Division, Rochester 4, N. Y.

the Kodak *HIGH SPEED* Camera

Kodak

▲ For more details circle **NED-1212** on enclosed inquiry slip ▲

Now More Positive Protection than Ever Before

with the *New* **FLEX-A-FOAM FILTER MASK**

Newly designed for maximum comfort and efficiency, it's easier to breathe through and talk through than an ordinary pocket handkerchief... yet filters non-toxic dusts as small as 1/25000 of an inch!

- Extremely light in weight—just one ounce complete.
- Self-adjusting to every face size—no interference with eye glasses.
- Simple sturdy design—only four interlocking parts.
- Only respirator made with long-lasting washable filter—outwears throw-away type as much as 100 to 1.

Dust Protection your workers will welcome and *Wear*

Sample $1.40 postpaid

★

Write for new descriptive folder

FLEX-A-FOAM FILTER MASK

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

For more details circle NED-1214 on enclosed inquiry slip

THESE AIRETOOL MIDGETS put

NEW LIFE

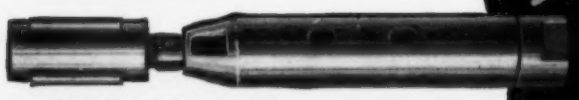
into HEAT TRANSFER EQUIPMENT

Single unit head with universal joint.

Brush type head.

Single unit head with cone cutter.

Drill head with universal joint.



Expanding blade type head with powerful Airetool motor.

SAFELY REMOVE DEPOSITS FROM SMALL TUBES ⅝" TO 2" I. D.

Keeping condenser, heat exchanger and other small tubes free of scale and other deposits boosts production and adds to the life and usefulness of valuable equipment. These Airetool midget cleaners have been especially designed to safely and speedily remove all forms of deposits regardless of degree of hardness or shape of tube.

Powerful Airetool midget motors are air-driven and team up with the right cutter head for perfect results.

If your plant uses small tubes, keep them clean with Airetool midget cleaners. Down-time is less. Efficiency is benefited. For full details, write The Airetool Mfg. Co., 308 S. Center St., Springfield, O.

AIRETOOL MANUFACTURING COMPANY SPRINGFIELD, OHIO

BRANCH OFFICES: New York, Philadelphia, Chicago, Houston, Tulsa, Baton Rouge

REPRESENTATIVES IN ALL PRINCIPAL CITIES

There's an AIRETOOL Tube Cleaner and Tube Expander for Every Type of Tubular Construction.

For more details circle NED-1215 on enclosed inquiry slip

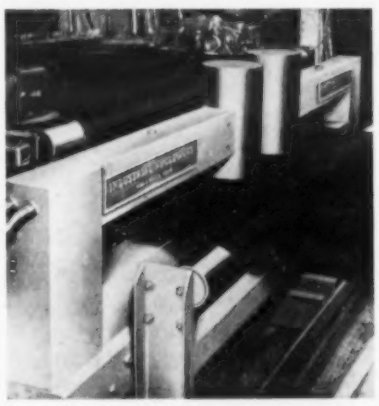
HIGH FREQUENCY VOLTMETER measures frequency range from 60 cycles to 700 megacycles

Voltage-divider resistors of model 161-A vacuum tube voltmeter are maintained to accuracy of plus or minus 1 per cent. Instrument has following ranges: 1, 3, 10, 30, 100, 300 and 1000 v full scale direct current and 1, 3, 10, 30, 100 and 300 v full scale alternating current. Center scale resistance values of 10, 100, 1000, 10,000, 100,000 and 1,000,000 ohms and 10 megohms are available and readings from 0.1 ohm to 1000 megohms are possible. One scale power level reading is from minus 10 to plus 10 decibels, calibrated from 3 v scale at 600 ohms.

Voltage-divider resistors are maintained to an accuracy of plus or minus 1 per cent (direct current), while 1 and 3 v dc and 1, 3 and 10 v ac scales are adjusted to accuracy of plus or minus 1 to 1½ per cent at time of manufacture. Overall accuracy at center scale readings in any range is within 3 per cent of reading. Frequency error is less than plus or minus 1 per cent from 60 cycles to 20 kc. It is less than plus or minus 1 decibel up to about 700 mc and does not exceed minus ½-decibel at 20 cps. Instrument made by **Electronic Measurements Co.**, P. O. Box 850, Eatontown 2, N. J.

For more details circle NED-1216 on enclosed inquiry slip

SHEET MATERIAL GAGE gives square yard weight readings of rubber, plastic and paper



Continuous measurement of rubber, plastic and paper sheet materials is possible with model R Accu-Ray beta gage. Non-contacting radiation gage provides readings directly in square yard weight with continuous accuracy of plus or minus 1 per cent. Featured are automatic control for positioning measuring unit across sheet to give profile readings and control for selection of desired weight ranges. Remote control station with repeat meter permits calender operator to read and control gage from distant point.

Recorder can be equipped with target and tolerance marking pens and chart marking pens for recording weight range and sheet position of gage. It is made in units for measuring 24, 36, 48 and 60 in. from edge of sheet and is insensitive to temperature variations, line voltage fluctuations, dirt, moisture, shock and vibration. Calibration is not required. Made by **Industrial Nucleonics Corp.**, Dept. 11, 1205 Chesapeake Ave., Columbus 12, O.

For more details circle NED-1217 on enclosed inquiry slip

FAST-HEATING, VERSATILE TEMCO HOT PLATES...

NEW DESIGN... for evaporations, boiling and general controlled heating

Latest engineering advances embodied in this TEMCO design lets you perform your work more efficiently, gives you extra economy of operation. Cast aluminum top plate heats to 500°F. in 30 minutes. Temperature range 140°F. to 850°F. Built-in Temcometer provides precise temperature control. Clean-cut modern stainless steel body is resistant to chemicals, easy to keep clean. Controls especially ventilated for cool operation and control panel recessed for protection against damage. Two compact sizes: 12" x 12" and 12" x 24", both 7" high Write for bulletin H-1 and dealer's name.

THERMO ELECTRIC MANUFACTURING CO.

484 Huff St., Dubuque, Iowa.

For more details circle NED-1218 on enclosed inquiry slip

NEW Bellows HAN-D-AIR CLAMP

Only $6.00 ea. $66. per doz.

- SAVES TIME in jig and fixture operations
- SAVES TIME in parts positioning
- SAVES TIME in parts ejection

Overall Size 4" x 1½" Square

The new Bellows HAN-D-AIR CLAMP is a spring return, single acting miniature air cylinder. 1⅛" bore develops 100 lbs. of pressure at 100 lbs. of air. (Power factor 1 to 1). 1" stroke. Threaded 5/16" diameter piston rod. Universal mounting: can be mounted horizontally, vertically, side, front flange, rear flange or front pivot. Overall size 4" long by 1½" square. 1/16" heavy wall brass cylinder; ⅝" heads; oil resistant "U" cup; tension balanced spring.

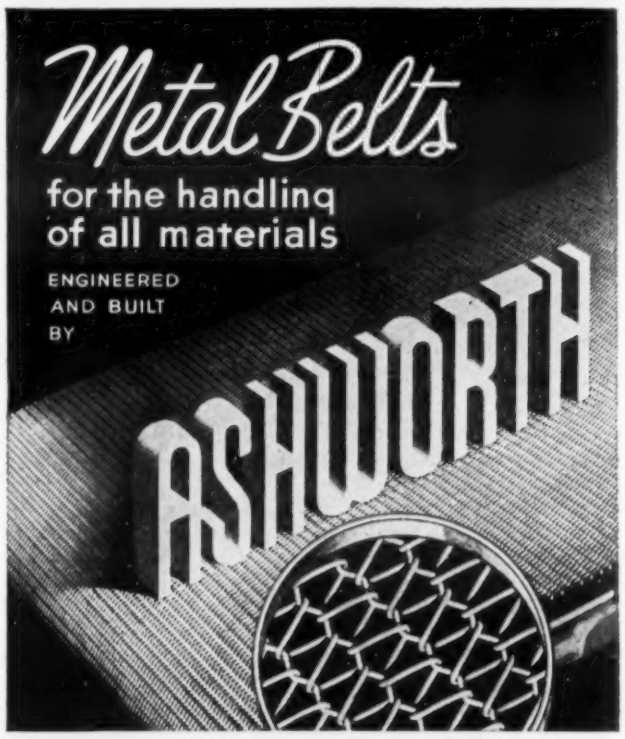
ORDER TODAY — Dept. NED 252 1249

The Bellows Co. AKRON 9, OHIO

For more details circle NED-1219 on enclosed inquiry slip

Metal Belts for the handling of all materials

ENGINEERED AND BUILT BY ASHWORTH



WRITE FOR ILLUSTRATED CATALOG 47D

ASHWORTH BROS., INC. METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chattanooga • Chicago • Cleveland • Detroit • Los Angeles • New York • Philadelphia • Pittsburgh • Seattle

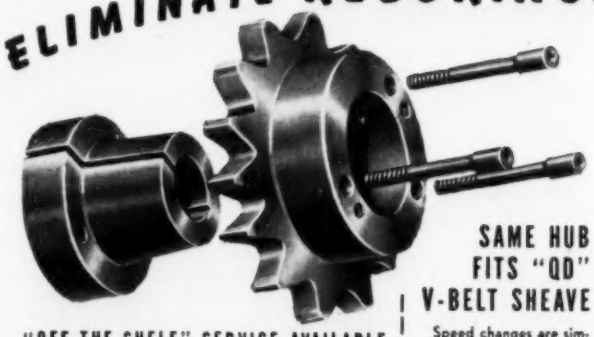
Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal - Halifax - Winnipeg - Vancouver

For more details circle NED-1220 on enclosed inquiry slip

FORT WORTH QD Roller Chain SPROCKETS WITH TAPERED SPLIT HUB

PATENT APPLIED FOR

ELIMINATE REBORING!



SAME HUB FITS "QD" V-BELT SHEAVE

Speed changes are simplified and "spare" sprockets can be carried more easily.

If your favorite distributor doesn't stock this new item, tell him about it. He'll reward you with better service.

"OFF THE SHELF" SERVICE AVAILABLE FROM INDUSTRIAL DISTRIBUTORS

Reboring of stock bore sprockets to fit various shafts is eliminated due to the various bores available in the QD hub. Installation and removal from the shaft is made easy by the tapered fit of the hub and sprocket. Hub assembly grips the shaft equivalent to a "press fit."

Catalog explaining additional advantages and construction details will be furnished on request.

OTHER FORT WORTH PRODUCTS: V-BELT DRIVES, SCREW CONVEYORS and ACCESSORIES, SCREW ELEVATORS, INDUSTRIAL FANS

FORT WORTH STEEL AND MACHINERY CO.

Dept. 22-2, 3600 McCart, Ft. Worth, Tex.

For more details circle NED-1221 on enclosed inquiry slip

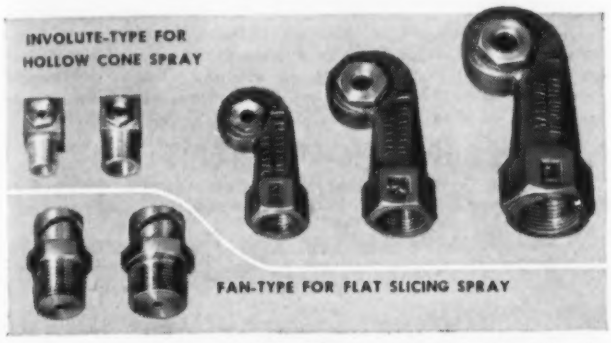
for • SPRAYING • WASHING • RINSING • COOLING • AIR CONDITIONING

Get the most out of your Spraying Equipment with minimum power . . . with efficient spraying.
Use Yarway Nozzles. No internal vanes or other restrictions to clog or hinder flow.
Wide range of standard sizes and capacities. Cast or machined from solid bar stock.
Thousands in use. Write for Bulletin N-616.

YARWAY

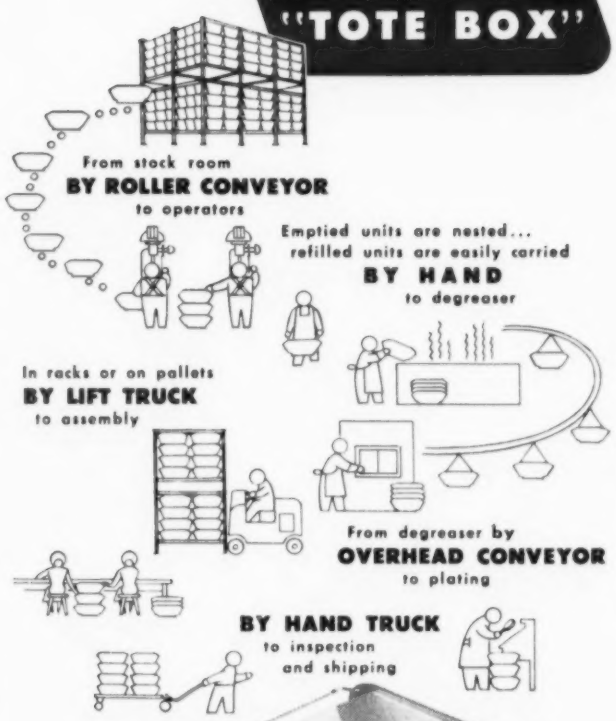
SPRAY NOZZLES

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.



For more details circle NED-1222 on enclosed inquiry slip

AT LAST- Scientific Design applied to the "TOTE BOX"



More than just a new materials handling box—the NesTier is a new system—a new technique—that speeds up the flow of work on any production line. It offers four definite advantages over all older methods of handling small parts: (1) saving of space; (2) greatest ease of handling in the stock room, on the assembly line and in transportation throughout the plant; (3) adaptability to conveyor systems; (4) visibility and easy accessibility of parts.

NesTier materials handling boxes nest when empty—tier when filled. Tiered, parts in all boxes are visible and accessible. NesTiers are ruggedly constructed of heavy gauge steel and are available in two standard sizes: No. 220—16 ga., 22⅝" long, weight 15 lbs.; No. 175—18 ga., 18⅛" long, weight 6 lbs.

Write for full details on NesTiers, racks, trucks, monorail carriers and dollies.

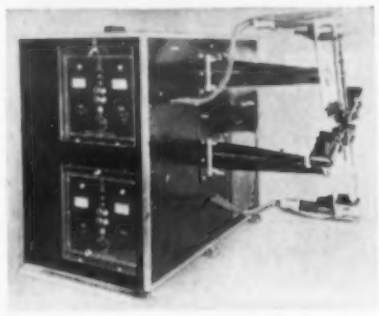
Our service includes complete engineering advice on systematizing the handling of small parts in your plant. Your inquiries are invited.

THE CHAS. WM. DOEPKE MFG. CO., Inc.
Rossmoyne, Ohio

NESTIER
Metal Specialties Division

For more details circle NED-1223 on enclosed inquiry slip

TIN PLATE THICKNESS GAGE
nondestructively checks plating on one or both sides of steel plate



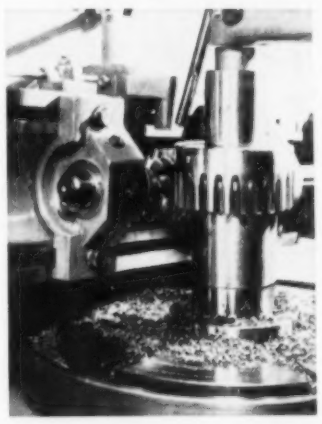
Efficient and economical use of critically short tin is possible through use of this improved tin plate thickness gage. Illustrated double unit measures tin plate thickness on both sides of steel plate. Machine is also available to check plating on one side only. Equipment is rated 6 kva and handles thicknesses ranging from 0 to 150 microinches.

Equipment uses an x-ray beam which is directed upon surface of sheet under test. Through voltage control, plating is penetrated and beam strikes the underlying steel. Rays emitted by the iron are measured by a Geiger counter and the intensity is expressed as a logorithmic function of the tin plate thickness. In actual practice, this operation is a simple one of reading the total count from an electro-mechanical register or a tape-printing register and converting the count into thickness by using a calibration curve.

Unit operates on 200-240-v ac. Detecting circuits are comprised of Geiger counter, cathode follower, scaling circuit, printing register and associated direct current power supplies. Made by **North American Philips Co.**, Research & Control Instruments Div., 750 S. Fulton Ave., Mt. Vernon, N. Y.

For more details circle NED-1224 on enclosed inquiry slip

GEAR HOBBING MACHINE
equipped with differential, it can cut spur, spiral and worm gears



Of universal type for spur gears, Cima imported gear hobbing machine is equipped with differential mechanism for simplified cutting of spiral gears. Cutter head is arranged for tangential feeding for generating multiple start worm gears without ridges on tooth flanks. Worm gears can be generated by means of fly cutters, permitting accurate production of gear, when hob is not available. Single or multiple thread worms can be made on production basis by placing worm blank on hob arbor and gear generator cutter on work arbor.

Machine will produce gears of following maximum specifications: spur, 20-in. diameter, 10-in. face, 5-diametric pitch; spiral, 30 degrees and 19 in., 45 degrees and 15 in., and 60 degrees and 14 in. Maximum hob dimensions are 5-in. diameter and 6-in. length. Available from **George Scherr Co.**, Dept. NED, 200 Lafayette St., New York 12, N. Y.

For more details circle NED-1225 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO WELDING CURTAINS

A SOUND INVESTMENT FOR PROTECTION OF PERSONNEL

Workers and passers-by are protected from harmful rays given off by welding operations. Also serve as a protective shield against flying chips and scale. Made of special flameproof and waterproof canvas—or asbestos—complete with eyelets for suspending on rod or pipe support.

SALVAGE COVERS AND FIRE BLANKETS ALSO AVAILABLE

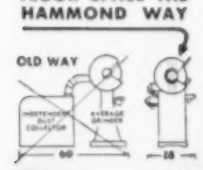
WRITE FOR BULLETIN L-22

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-1226 on enclosed inquiry slip

"BUILT-IN" FEATURE

SAVE OVER 50% FLOOR SPACE THE HAMMOND WAY



Hammond of KALAMAZOO

NO-DUST GRINDER

- Requires only 6½ square feet.
- Protects employees' health.
- Protects nearby machine tools against excessive wear from dust and grit.

A self-contained Grinder and Dust Collector for 10", 12" and 14" wheels. Write for Bulletin No. 104.

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE • KALAMAZOO 54, MICHIGAN

For more details circle NED-1227 on enclosed inquiry slip

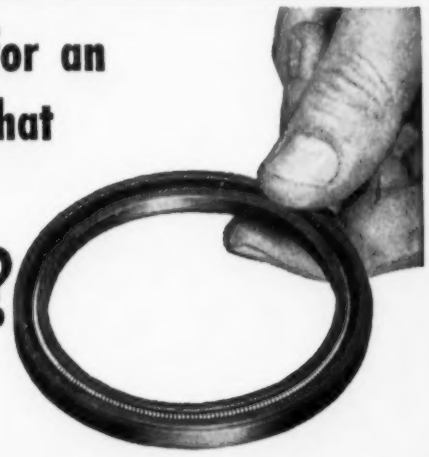
NEW SLIDE CHART
gives you information on
• BENDING RADII
• COIL DIAMETERS
for Stainless Tubing and Pipe from ⅜" to 5" O.D.

Just write a note on your company letterhead and we will send your copy of this useful Carpenter Stainless Tubing Slide Chart.

THE CARPENTER STEEL COMPANY
Alloy Tube Division Union, New Jersey

For more details circle NED-1228 on enclosed inquiry slip

Looking for an oil seal that runs cool?



More and more designers of quality machine tools are protecting their equipment against overheated oil seals by using Johns-Manville Clipper Seals.

These precision-moulded seals assure cool, trouble-free operation plus long service life because their tough, dense heel provides the rigidity needed for an accurate press fit in the cavity . . . while the concentrically moulded flexible inner lip maintains *light*, but *positive* contact with the shaft through a specially designed garter spring.

This provides effective sealing under all conditions, with a minimum of friction.

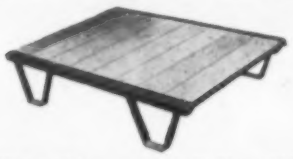
The solution to *your* sealing problem may be the all-around efficiency of Clipper Seals. They are made in split and endless types, for shafts from ¼" to 66" in diameter, in a variety of lip designs for all types of bearing surfaces; for temperatures to 450F and shaft speeds to 3500 rpm. For complete data write for Brochure PK-46A. Address Johns-Manville, Box 290, New York 16, N. Y.

Johns-Manville CLIPPER SEALS

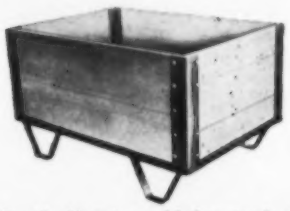
For more details circle NED-1229 on enclosed inquiry slip

In production or in storage

IRONBOUND EQUIPMENT HANDLES SMALL PARTS MORE EFFICIENTLY



Standard 2-way entry bolted type skid built to handle loads up to 5 tons.



Standard box top welded to standard skid. Available too, with removable boxes. Handles many items in production and storage.

Flexible arrangement of boxes and skids permits tiering and stacking to meet your individual requirements. Provides quick availability, easy handling, or storage for complete units or parts.

Each of the units illustrated has an important use in modern industry. Ironbound skid platforms and box tops are prime sources of increased plant capacity so vitally needed today. Our representative can help you to increase your output and plant space. Catalog GP-7 may help you, too!

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle **NED-1230** on enclosed inquiry slip

How to measure a folding rule—

Compare a Stanley "Green End" with any other folding rule. See how much more real rule value there is in a rule that has "Green Ends". Famous Stanley "Zig-Zag", "Pull-Push" and Boxwood rules are available in a wide variety of styles, sizes and markings for every industrial need. Call your distributor.

Handy
Pocket-size. Opens as needed, up to 6'.

Greater Accuracy
"Ball-socket" action locks joints, prevents "stretching or jack-knifing".
Exceeds U. S. Govt. standards for accuracy.

Longer Wearing
Rust-resistant nickel silver joints — longest wearing of any folding rule.
New plastic coating on all sticks — wears four times longer.
Select rock maple sticks — tough and flexible.

Easier Reading
Large, black markings on white finish. Graduated in inches and 16ths all edges.

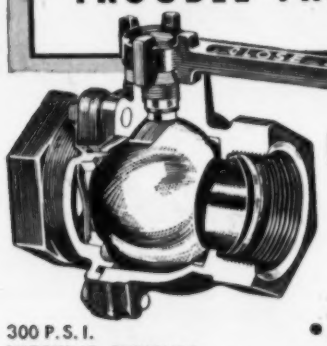
Stanley Tools, New Britain, Conn.

THE TOOL BOX OF THE WORLD **STANLEY**
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

For more details circle **NED-1231** on enclosed inquiry slip

ENGINEERED TO GIVE LONGER TROUBLE-FREE SERVICE



ROCKWOOD ball VALVES

300 P.S.I. WORKING PRESSURE

- *LEAK PROOF SERVICE*
- *FULL ROUND FLOW*
- *QUICK OPENING & CLOSING*

The *most dependable* and *efficient performing* Valve on the market. Every Rockwood Valve is designed and built to give you longer and more economical service.

The full *round* flow — leak proof service — quick opening and closing features of the Rockwood Ball Valve give you better and faster service with no maintenance. When you install a Rockwood Valve on the line, it does the job better.

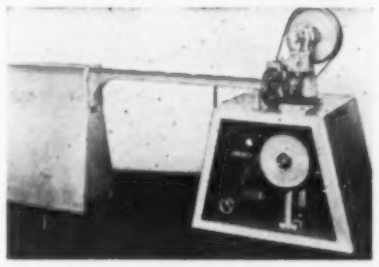
For use in oil refineries, food, paper, textile, chemical and rubber plants, etc. Write for sizes and prices and for bulletin V-4.

Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
44 HARLOW ST. WORCESTER 5, MASS.

For more details circle **NED-1232** on enclosed inquiry slip

MARKING & CUT-OFF MACHINE handles extruded or finished work



Aluminum, tin, plastic and solder are some of the many materials that can be handled by combination marking and cut-off machine for tags and plates. Basically, unit consists of two EMCO presses. Conveyor feeds material to machine through roll-feed attachment which holds section to be stamped or marked. One press performs the marking while second press cuts off piece after being marked. Selection of lengths to be cut off is possible as well as widths and thicknesses. Shaped pieces can be produced after marking operation, if desired. Machine speed is adjustable to suit material being processed, whether extruded or in finished form. Made by **Klaas Machine & Mfg. Co.**, 4310 E. 49th St., Cleveland 25, O.

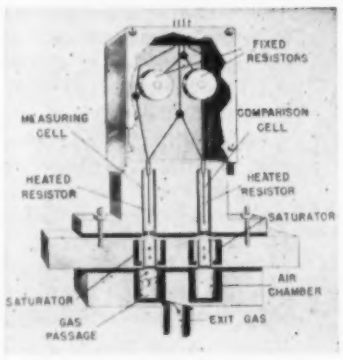
For more details circle **NED-1233** on enclosed inquiry slip

HIGH-SPEED SOLDERING IRON has replaceable elements and tips

Electric soldering iron is designed for use on fast production lines where high speed is required from iron with small tip diameter. Plug-in type iron is rated at 150 w and has ¼-in. diameter tip which reaches soldering temperature beyond that actually needed. Heating element is constructed to withstand the high temperature developed. Designated as model P-154, iron has replaceable elements and tips. Made by **Hexacon Electric Co.**, 145 W. Clay Ave., Roselle Park, N. J.

For more details circle **NED-1234** on enclosed inquiry slip

CARBON DIOXIDE RECORDER features accurate 5-second response



Use of CO_2 measurement as a guide to combustion efficiency, thermal conductivity principle of gas analysis and electronic type operation are utilized by Condu-Therm carbon dioxide recorder which has 5-second response with plus or minus 0.25-per cent accuracy. Speed is achieved because of rapid change of sample gas, small volume of gas in analyzing cell and continuous connection between analyzer and recording pen motor. Instrument is built for boiler plant use and features linkage of ⅛ x ½-in. bar, multiple pen bearing of telescoping stainless steel tubes, Oilite bearings, chart plate of ¼-in. permanent mold casting and unit construction for easy replacement of each main element. Made by **Hays Corp.**, 980 Eighth Ave., Michigan City, Ind.

For more details circle **NED-1235** on enclosed inquiry slip

LOW COST PROTECTION FOR MAN AND MACHINE

ELASTICONE®
GUIDE PIN COVERS

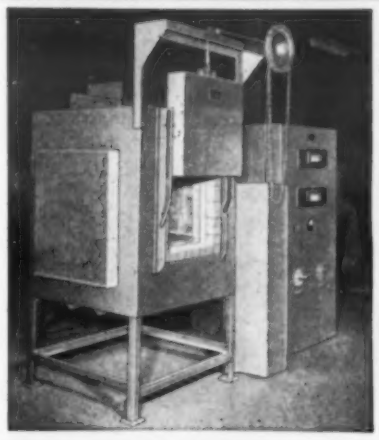
JUST SNAP INTO PLACE
NO TOOLS REQUIRED
NO INSTALLATION COSTS

Elasticones are manufactured in stock sizes. Specify O. D. of bushing and full open height of set when ordering.

Protects Pins and Bushings from nicks, scratches . . . prevents injuries to Die Setters & Operators. Write for full information.

CENTRAL SAFETY EQUIPMENT COMPANY
2202 E. HUNTINGDON STREET, PHILADELPHIA 25, PA.

For more details circle **NED-1236** on enclosed inquiry slip



Accurate control at all heat levels up to 2500° F. with this new

PERECO Shop Furnace

General-purpose Model FG-7800

This single Pereco Shop Furnace covers the full range of heat-treating requirements. Produces uniform, clean, electric heat up to 2500° F. for hardening, annealing, normalizing, etc. Roomy work chamber is 24" l., 18" w., 18" h., thickly insulated. Gas-tight case is heavy-gauge steel. Atmosphere connections available. Door is wedge-fit, heat-seal type. Easy to open and shut by chain hoist. Separate panel mounting puts all operating controls in handy reach. Complete "FG" series includes furnace models in various sizes. Let us send you details. Write today.

PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio
EXPORT DEPT.—The Inland Export Co., Inc., Greer Bldg., New Castle, Pa.

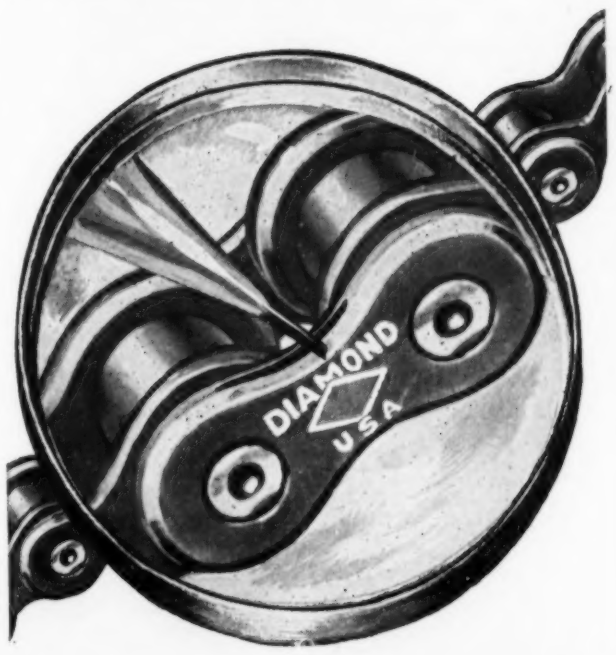
PERENY EQUIPMENT COLUMBUS OHIO

• STANDARD AND SPECIAL FURNACES FOR TEMPERATURES 450° TO 5000° F.

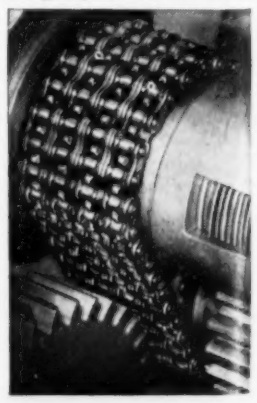
For more details circle **NED-1237** on enclosed inquiry slip

The Symbol of ROLLER CHAIN QUALITY— The DIAMOND

TRADE ◇ MARK



• The "Diamond" mark stamped on every link is more than a ready means of identifying Diamond Roller Chains. It is a symbol indicating unvarying quality of the product and the integrity of the maker.

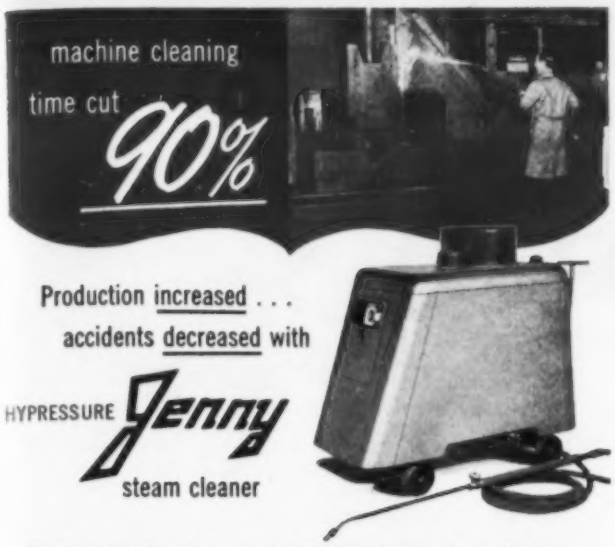


For power transfer of every kind, this flexible uniformly-made Roller Chain assures smooth operation, high efficiency (98-99%) and positive insurance against slippage. Diamond Roller Chains operate equally well on short or long centers,—at low or high speeds,—and at small or very large horsepower capacities.

DIAMOND CHAIN COMPANY, Inc.
Dept. 457, 402 Kentucky Avenue, Indianapolis 7, Indiana
Offices and Distributors in All Principal Cities
Refer to the classified section of your local telephone directory under the heading CHAINS or CHAINS-ROLLER

DIAMOND ROLLER CHAINS

For more details circle **NED-1238** on enclosed inquiry slip



Here are actual savings reported by four prominent manufacturers* who switched from hand cleaning to *Hypressure Jenny Steam Cleaning.*

MACHINE	Hand Cleaning	Hypressure Jenny Steam Cleaning	Man-Hours Saved
40 Ton Toggle Press	64 hrs.	3 hrs.	61 hrs.
72" Calender Machine	48 hrs.	5 hrs.	43 hrs.
Auto. Screw Machine	49 hrs.	5 hrs.	44 hrs.

Names on request.

And keep in mind that they represent economies in actual cleaning time only. Additional savings of up to 40% in repair costs, less "down-time" for production machinery, and fewer lost-time accidents, invariably result when machinery, tools, equipment and floors are kept clean and free of dangerous, speed-retarding dirt and grease.

Complete details are yours for the asking. Write today.

HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING CO.

Serving since 1892

P. O. BOX 84 CORAOPOLIS, PA.

For more details circle **NED-1239** on enclosed inquiry slip

industrial

OIL AND GAS BURNING EQUIPMENT

- Mechanical Atomizing Oil Burners
- Steam Atomizing Oil Burners
- Refractory Burner and Muffle Blocks
- Industrial Gas Burners
- Low Air Pressure Oil Burners
- Fuel Oil Pump Sets
- Valves, Strainers, Furnace Windows
- Tandem Block Combustion Units
- Combination Gas and Oil Burners

Detailed information gladly sent you upon request.

NATIONAL AIROIL BURNER COMPANY, INC.

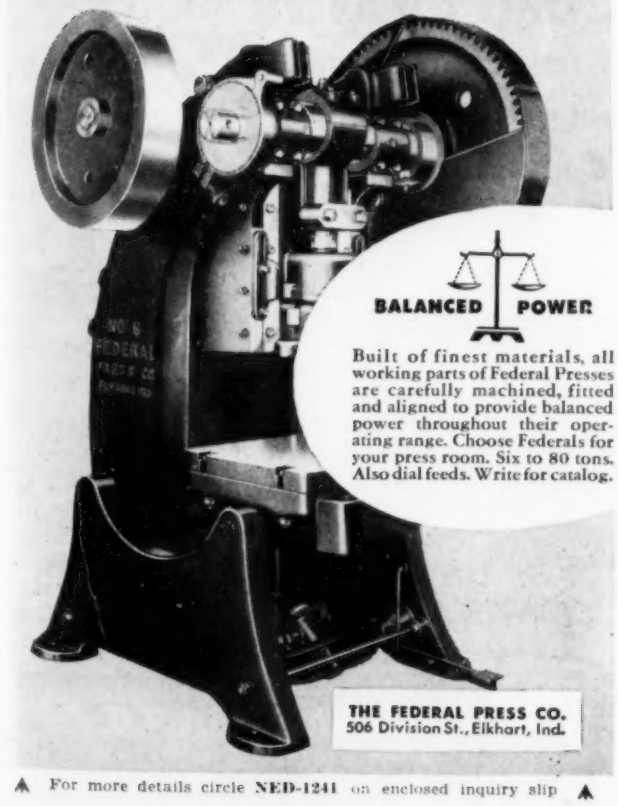
1316 EAST SEDGLEY AVENUE, PHILADELPHIA 34, PA.

Southwestern Division: 2512 SOUTH BOULEVARD, HOUSTON 6, TEXAS

For more details circle **NED-1240** on enclosed inquiry slip

FEDERAL PRESSES

27 YEARS OF QUALITY CONSTRUCTION



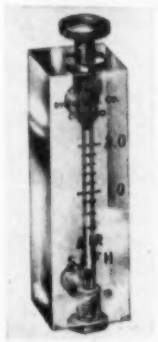
For more details circle **NED-1241** on enclosed inquiry slip

WATER-OIL SEPARATOR aids industrial oil purification

Capable of reducing water content of oil to less than 0.1-per cent, Pur-Dry water-oil separator can be used for turbine, hydraulic or any industrial oil purification problem where water is a troublesome factor. Unit performs a complete filtering service for removal of solid contamination, acids and other sludge-forming products of oxidation as well as water separation. Cleansing action is continuous and automatic. Made by **Honan-Crane Corp.,** 668 Wabash Ave., Lebanon, Ind.

For more details circle **NED-1242** on enclosed inquiry slip

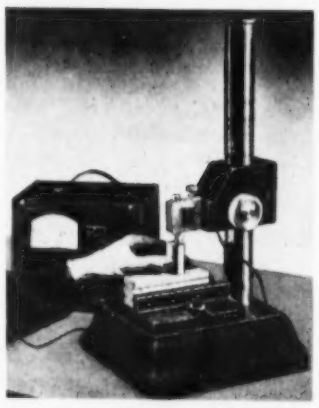
FLOWMETERS for measuring gas or air flow



Regardless of changes in gas or air flow rate, or when used as replacement for sight-feed bubblers, these flowmeters are read by observing the line flow. Made of solid acrylic, they have built-in control valve. Special scale ranges are available when ordered in productive quantities. Single units or one-piece multiple units for 0-2 to 0-10 cu ft per hour at standard conditions are made for front-of-board or flush panel mounting, with mounting holes to specification. Made by **F. W. Dwyer Mfg. Co.,** Dept. NED, 317 S. Western Ave., Chicago 12, Ill.

For more details circle **NED-1243** on enclosed inquiry slip

ELECTRONIC PRODUCTION GAGE has two continuous linear scales



Consisting of induction type gage head mounted on a stand and high stability four-tube amplifier, Par-Ac electronic production gage can be used for repetitive dimension gaging on long run, short run or toolroom work. Gage head is set to required dimension and meter on amplifier shows how far off-size work is on either side of zero, on either of two continuous scales. Standard amplifiers read 0.0005 and 0.00005-in. or 0.0001 and 0.00001-in. per scale division; full scale readings are plus and minus 0.005 and 0.0005-in. or 0.002 and 0.0002-in., respectively. Two scales can be used interchangeably. Meter response is instantaneous, without overshoot. Throat clearance is 3⅜ in. and work to height of 8⅜-in. above anvil can be accommodated. Made by **Graham-Mintel Instrument Co.,** 735-A Carnegie Ave., Cleveland 15, O.

For more details circle **NED-1244** on enclosed inquiry slip

DON'T LOSE VALUABLE DUST!

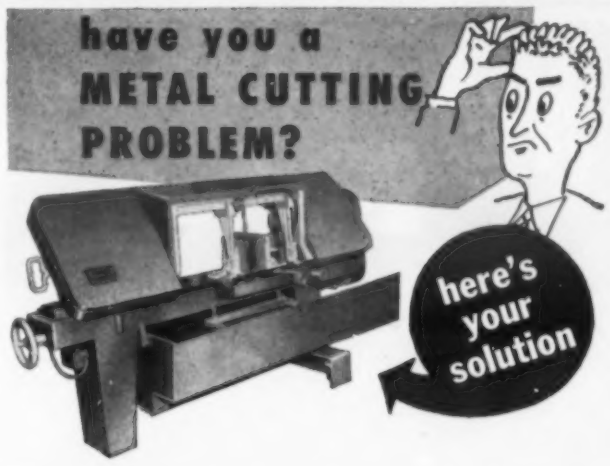
Buell's wide experience in the recovery of Valuable Dust can help you boost your plant's efficiency now—when peak efficiency is really needed!

To learn how a Valuable Dust Recovery System can be designed to suit your plant's special requirements, write today for full information on the *3 basic systems* of efficient dust recovery and dust collection. Ask for the new, illustrated Buell 'Dust Recovery' bulletin. Buell Engineering Co., Dept. 23-B, 70 Pine Street, New York 5, New York.

buell

Engineered Efficiency in Dust Collection

For more details circle **NED-1245** on enclosed inquiry slip



Want continuous or intermittent production cutting? Need accuracy of a few thousandths with no burr and minimum kerf? Want to cut bars, rounds, angles and odd shapes at lowest possible cost? Then, get a Kalamazoo Band Saw!

Three sizes are available for cutting 6" to 12" round and from 6" x 10" to 12" x 20" flat. All models can be had with casters for complete portability. Each model has many exclusive features which assure *better cutting at lowest cost.* Write for complete details.

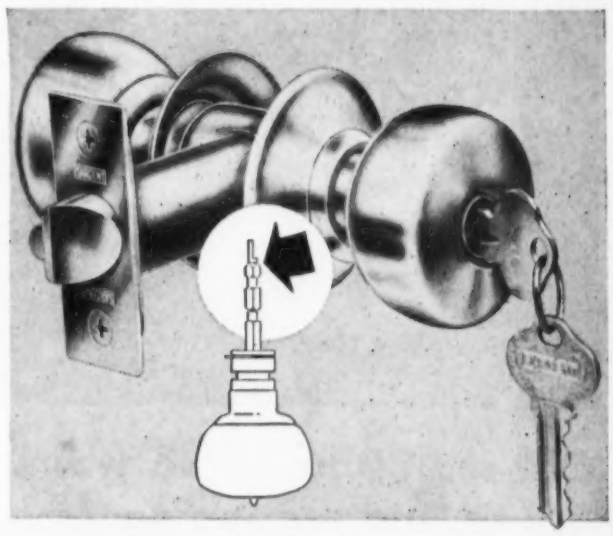
MACHINE TOOL DIVISION

***Kalamazoo* TANK and SILO CO.**

212 HARRISON ST., KALAMAZOO, MICHIGAN

For more details circle **NED-1246** on enclosed inquiry slip

National Retaining Rings cut costs again!



This handsome new DuaLock, offered by Sargent and Company of New Haven, Conn., is the result of many years of engineering research.

Its simplicity, sturdy safety, ease of application and beauty of design assure a constantly increasing demand. Because of the skill with which fine precision parts are built into this greatly simplified lock it requires only an exceptionally small cross bore.

By using National retaining rings Sargent saves material, weight, space and assembly time—without sacrificing efficiency or strength.

Examine your products—metal, wooden or plastic. Many products as well as many machines can be redesigned to use retaining rings. Groove your shafts instead of wastefully cutting down larger shafts to form shoulders. And groove your housings too.

Our high grade steel rings assure greater savings and greater margin of profit.

Let us show you how retaining rings can do an efficient job for you. These inexpensive, efficient artificial shoulders save time, save weight, save space, save materials, save money.

Write today for descriptive folder of many types of National retaining rings.

THE NATIONAL LOCK WASHER CO.

NEWARK 5, NEW JERSEY • MILWAUKEE 2, WISCONSIN, U.S.A.

For more details circle **NED-1247** on enclosed inquiry slip

New Flexible Sealing T-J AIR CYLINDER

Designed with revolutionary application of Super-Cushion
It's *sealed with pressure*—insures positive cushion action combined with automatic valving action for fast return stroke . . . eliminates binding and sticking . . . operates with *low friction, minimum wear,* and *added power* due to higher efficiency. Many more plus features! Wide range of styles and capacities. Write for bulletin 252. The Tomkins-Johnson Co., Jackson, Mich.

36 YEARS' EXPERIENCE T-J
TOMKINS-JOHNSON
VALVES · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

▲ For more details circle **NED-1249** on enclosed inquiry slip ▲

OSBORN

Heard about these ways to find manpower?

EVERY manufacturer should know about this brush . . . the Osborn Master® Strip. In its more than a thousand forms, shapes and sizes, this power brush . . . at the push of a button . . . is doing jobs formerly requiring many skilled hands. It is boosting output, improving product quality and slashing costs.

Master Strip can be used in special mountings—straight, curved or coiled in a helix. Its fill material can be wire, hair, fibre, textiles or synthetics in trim lengths from 1 to 10 inches. It comes in any length up to 120 inches. Name your problem—cleaning, scrubbing, finishing or many others. It can be matched to *your* job!

The nearby **O**sborn **B**rushing **A**nalyst will gladly study *your* manufacturing operations and explain how you can benefit with this versatile tool! Call today or write *The Osborn Manufacturing Company, Dept. 624, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

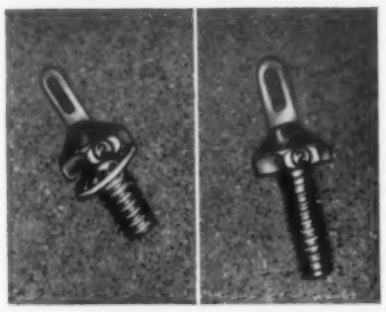
SCRUBS STEEL
Master Strip wound helically around a steel core becomes an Osborn Heli-Master® Brush. Here it scrubs strip steel preparatory to electrolytic tinning.

Osborn Brushes

OSBORN POWER, MAINTENANCE AND PAINT BRUSHES AND FOUNDRY MOLDING MACHINES

▲ For more details circle **NED-1250** on enclosed inquiry slip ▲

BUTTON CAPACITORS for vhf and uhf applications

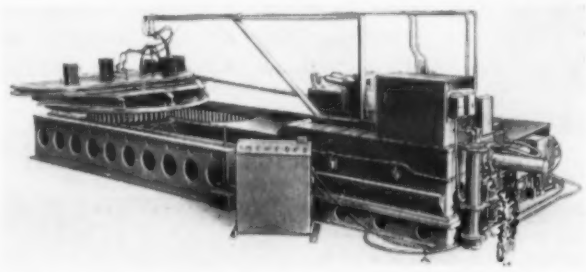


Tiny disk capacitor element incorporated in series of button ceramic capacitors for very high and ultra high frequency applications is buried in recess in head of common threaded fastener. Advantages of button units include: minimum ground inductance of fixed value for better mechanical and electrical uniformity; thorough shielding of capacitor element by outer metal shell; short and radially uniform bypass path to ground and lug terminals at tube socket height. Units are rated at 500 v dc in values up to 1000 mmf, depending upon characteristics. Four thread variations are available; type 505C, self-tapping 6-32 thread; type 507C, standard 6-32 thread with nonremovable lock washer; types 506C and 508C, similar to 505C and 507C, respectively, but with 10-32 threads. Made by **Sprague Electric Co.,** Dept. D, North Adams, Mass.

▲ For more details circle **NED-1251** on enclosed inquiry slip ▲

ROLLER TABLE BENDING MACHINE hydraulically operated unit cold-forms metals normally hot-formed

A variety of structurals and sheet metal parts which are conventionally hot-formed can be cold stretch-formed by roller table bending machine capable of handling parts



up to 2½ sq-in. area. Providing variable stretch control, machine is powered by hydraulic mechanism, and can be set up for completely automatic operation. Unit consists basically of stationary chuck table; heavy rack and direct-connected hydraulic cylinder; and table gear meshed with rack, and upon which dies are mounted.

Rack exerts stretching load against table gear as it rolls with hydraulic-powered carriage toward chuck table. When preset pressure point is reached rack is free to be pulled through the gear. At that point table will travel in straight line instead of previous rotation. Rack again starts to travel when shape of dies presents different contour. Constant stretching load is maintained regardless of shape of part. Machines are supplied in 12½, 25 and 65-ton models as well as in capacities and modifications for special purposes, and can be equipped with mechanical or hydraulic chucks. With hollow chucks, any length strip stock can be formed and cut for continuous production of parts from coiled strip steel. Made by **Struthers Wells Corp.,** Machinery Div., Titusville, Pa.

▲ For more details circle **NED-1252** on enclosed inquiry slip ▲

Plenty of Places...

Where this 3-in-1 Workhorse Will Save Time and Work

SERVICE LIFTABLE

Table Top 26" x 43"

IT'S A WORK BENCH
A work bench on wheels, with a steel top that moves up and down—that's the Service "Liftable".

IT'S A TRUCK
Perfect for moving heavy dies, assemblies from one spot to another . . . saves lifting and carrying.

IT'S A LIFTER
Transfers heavy units from one table height to another merely by cranking the top up or down to any height from 28" to 42".

To move heavy pieces, dies, assemblies vertically from one level to another—and then horizontally from one place to another—use the Service LIFTABLE. Lowered, the top is 28" from floor . . . raised, it's 42". Capacity 2000 lbs. . . . chain and screw lifting mechanism . . . all welded construction . . . locks positively at any height . . . readily portable. Cut handling costs—put LIFTABLES in your plant.

Get Descriptive Circular—Write Today.

SERVICE CASTER & TRUCK CORP.

INDOOR MILES Made EASIER and SAFER

Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
See your classified Telephone Directory for name of nearest Service Distributor

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I SEE A BRIGHT FUTURE FOR YOU...

. . . when you depend on UMH METAL HOSE for long, efficient service

Profit by the experience of thousands of others who have proved that UMH METAL HOSE renders maximum service under stress, costs less in the long run, gives greater satisfaction. Name any conveyance problem where flexibility and durability are a must . . . and UNIVERSAL will provide the right type of metal hose for the most exacting job.

UMH
Seamless Flexible Hose, leakproof under high pressures and resistant to vibration.

UMH
Interlocked High Pressure Hose with asbestos packing.

UMH
Interlocked Exhaust and Blower Tubing, up to 12" I. D.

This is just a part of the complete line of UMH Flexible Hose that solves every conveyance problem.

Send us an outline of your requirements . . . and ask for Catalog U-101 . . . today!

UNIVERSAL METAL HOSE CO.
2155 SOUTH KEDZIE AVENUE • CHICAGO 23, Ill.

▲ For more details circle **NED-1254** on enclosed inquiry slip ▲

FAFNIR Ball Bearing Power Transmission Units

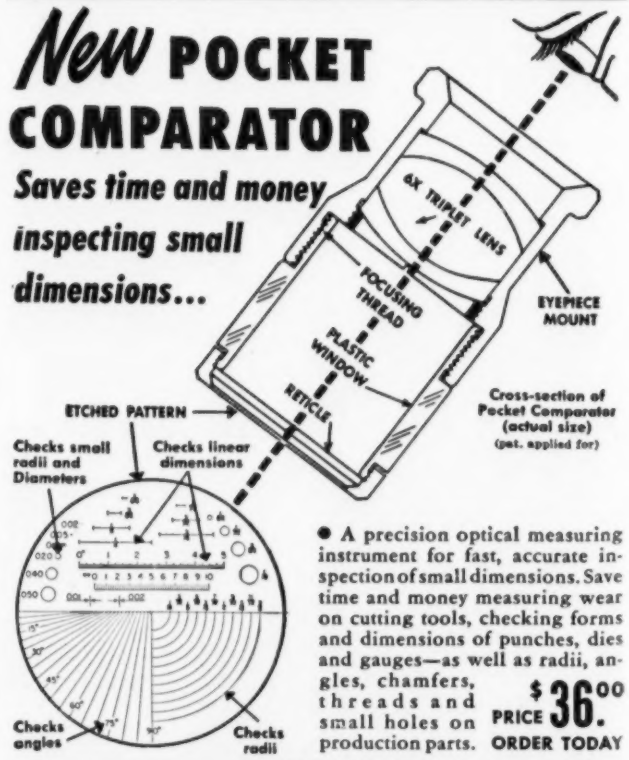
THE FAFNIR BEARING COMPANY
NEW BRITAIN, CONN.

FAFNIR BALL BEARINGS MOST COMPLETE LINE IN AMERICA

▲ For more details circle **NED-1255** on enclosed inquiry slip ▲

New POCKET COMPARATOR

Saves time and money inspecting small dimensions...



● A precision optical measuring instrument for fast, accurate inspection of small dimensions. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as radii, angles, chamfers, threads and small holes on production parts.

PRICE $36.00 ORDER TODAY

a product of **BELL & HOWELL CO.** distributed by

Write for FREE descriptive folder

See Your National Tool Co. Representative or Local Jobber

NATIONAL TOOL CO.
11210 Madison Avenue Cleveland 2, Ohio

▲ For more details circle **NED-1256** on enclosed inquiry slip ▲

CLOTH BAG DUST FILTERS
for individual machines

These complete, compact Sly "Unit" Dust Filters offer many economies in limited capacity ranges for the purpose of collecting dust from grinding, sanding, screening, mixing, pulverizing, packaging and finishing operations.

Often several of these units are employed in preference to a single large collector, for greater flexibility of operation, to save piping, and to keep different materials separate.

When you choose your dust collector be sure to get plenty of cloth for the air volume to be filtered. Never install a collector with less than a square foot of cloth for each four cubic feet of dust-laden air. Buy Sly—be safe.

Sly "Unit" Filters are engineered to assure long-time operating efficiency. Low cost, compact, easy to install. Made by **The W. W. Sly Manufacturing Co.,** 4748 Train Avenue, Cleveland 2, Ohio. There are experienced Sly engineers in New York, Chicago, Philadelphia, Syracuse, Detroit, Buffalo, Cincinnati, St. Louis, Indianapolis, Birmingham, Los Angeles, Toronto. Advt.

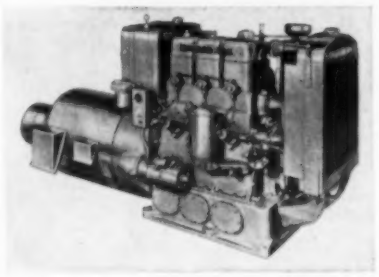
▲ For more details circle **NED-1257** on enclosed inquiry slip ▲

INTERNAL THREAD GAGE
can measure bores down to ¼-in.

Originally developed to provide rapid and accurate measurement of internal threads, British made John Bull Intercheck internal thread gage finds subsequent application in measuring small bores and recesses down to ¼-in. Measuring mandrel is collapsed by compression of trigger. Release of trigger expands gaging contacts into thread. By reference to known standard, exact size of thread can be determined. Three mandrels can be provided to cover range of bores with diameters of ¼ to ½-in. When measuring small bores, pistol grip is removed and trigger is turned to position allowing finger piece to lie parallel with body of gage. This gives greater control of instrument. Distributed by **O-Vee Spring Gauge Co.,** Dept. NED, 2516 W. Vernon Ave., Los Angeles 8, Calif.

▲ For more details circle **NED-1259** on enclosed inquiry slip ▲

THREE CYLINDER DIESEL
self-contained unit is heavy duty type for small horsepower needs



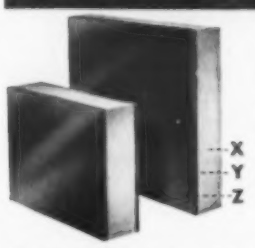
Conservatively rated at 30 to 45 hp within speed range of 1200 to 1800 rpm, three cylinder 4FS3 Diesel engine is self-contained unit available as electric generator set, pumping unit or for direct connection or belt drive. Engine has 4½-in. bore and 5¼-in. stroke, and is four-cycle, vertical, mechanical injection type.

As generator set, engine is equipped for ready connection to load and comes in direct or alternating current models from 20-30 kw in all standard voltages, 50 or 60 cycle. In this capacity it is built to generate power for large magnets, sand and gravel plants, saw mills, oil field rigs, or for standby service in buildings, airports, small plants and dairies. As pumping unit, engine can deliver 500 to 3000 gpm at 20 to 220-ft head and is applicable for quarry washing, draining, dredging, pumping or sprinkler or flood irrigation. With direct or clutch power drives engines are adaptable for hoists, shovels, well drilling machines, compressors, blowers, saw mills and oil field pumps.

Built for stationary applications, engine starts and operates on standard Diesel fuels. Electric starting equipment includes motor and V-belt driven battery charging generator provided with voltage regulator and reverse current protection. Unit can also be had with heat exchanger cooling for marine auxiliary applications. Built by **Nordberg Mfg. Co.,** 3073A S. Chase Ave., Milwaukee 7, Wis.

▲ For more details circle **NED-1260** on enclosed inquiry slip ▲

CHEMELEC MULTI-BOND



X. *Pure Dielectric Material*
Y. *Multi-Bond Area*
Z. *Conducting Metal Surface*

Metal Faced TEFLON*

Here is the answer to the bonding and hermetic sealing of dielectric materials to metal components.

Chemelec Multi-Bond is metal-faced pure or filled TEFLON, produced by an exclusive (patents pending) method of uniting fluorocarbon resins and metals with an interlocking bond unaffected by severe mechanical shock, vibration and unequal rates of thermal expansion.

The bond is micro-crystalline in structure and gradually changes from dielectric to metal, the conducting metal surface being applied by electro-deposition or other conventional means.

Facing metals include practically all the ferrous and non-ferrous metals, the ferro magnetic group and the precious metals.

Sheets are available, metal faced on one or both sides, in thickness from .034 to 1.75 in. and in sizes up to 36 in. square. Write for Bulletin MI-424.

**du Pont's trademark for its tetrafluoroethylene resin.*

UNITED STATES GASKET COMPANY

FLUOROCARBON PRODUCTS DIVISION
654 N. 10TH STREET, CAMDEN, N.J.
FOREMOST FABRICATORS OF "TEFLON" AND OTHER FLUOROCARBON PLASTICS

▲ For more details circle **NED-1262** on enclosed inquiry slip ▲

Because FLEXLOC Self-Locking Nuts are one piece, all metal, they save in assembly, purchasing and stocking as compared with lock washers. Because FLEXLOC Nuts are both stop and lock nuts, they *lock* and *stay locked* in any position on a threaded member. Samples available upon request. Just let us know the size you need. STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

FLEXLOC LOCKNUT DIVISION **SPS** JENKINTOWN PENNSYLVANIA

▲ For more details circle **NED-1263** on enclosed inquiry slip ▲

Plant engineer installs six MICRO Precision Switches for automatic control of grit blasting fixture

Plant Engineer Fred Sebring of Thompson Pipe and Steel Company, Denver, installed six MICRO limit switches on a grit blasting fixture which permit automatic control of the cleaning of pipe seams prior to welding.

The formed pipe is pushed into the fixture and three limit switches take over the control of the blasting. The other three switches stop the feed motor. They are placed in sequence on the fixture to accommodate different lengths of pipe.

Plant production men in every type of industry are giving old equipment new life and lowering production costs by the use of MICRO precision switches. Write today for your copy of MICRO TIPS . . . full of practical ideas like this.

There is a MICRO SWITCH Distributor near you. They are located in 122 cities. Look under "Switches, Electric" in your classified phone book.

The 1ML1 MICRO LIMIT Precision Limit Switch . . . a rugged, heavy duty, sealed precision limit switch with many adjustable features. Also available with straight plunger actuator and roller plunger actuator for "in line" operating motion.

Three MICRO 1ML1 limit switches shown on grit blasting fixture in factory of Thompson Pipe and Steel Company.

MICRO SWITCH
FREEPORT, ILLINOIS
MICRO Snap-Action Switches . . . Honeywell Mercury Switches
A Division of Minneapolis-Honeywell Regulator Company

▲ For more details circle **NED-1258** on enclosed inquiry slip ▲

HERE'S WHY: Heavily ribbed, smoothly machined cast-iron top provides a "surface plate" . . . Table equipped with lock-leveling screws . . . Steel shelf in sturdy steel welded base . . . Steel tool box shelf, guard rail, and drawer with lock . . . Vise and individual light can be easily attached . . . Bench is portable. Write for details.

THE CHALLENGE MACHINERY CO.
Office, Factories, Show Room Challenge *Grand Haven, Michigan*

▲ For more details circle **NED-1261** on enclosed inquiry slip ▲

REDUCE HANDLING
of Tools, Parts and Materials

Because Stackbins are portable containers — not fixtures — tools, parts and materials can be carried to departments, from machine to machine, or held in stockrooms without being transferred from one container to another. Stored in Stackracks, any Stackbin is instantly accessible when its contents are needed — without disturbing any other bin. *Stackbins*—individual hopper-fronted stacking bins, slide like drawers in *Stackracks* — individual units which lock together to form racks of any size, shape or capacity.

STACKBINS IN STACKRACKS

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM *"Stacked and Still Accessible"*

▲ For more details circle **NED-1264** on enclosed inquiry slip ▲

WHO MAKES PHASE CHANGING TRANSFORMERS?

Acme Electric *is* Your Source of Supply!

Once in a lifetime you may have need for phase changing. Then it's important to know where you can obtain this special type of transformer. Acme Electric have been supplying phase changing transformers to America's Production Plants in sizes from 3 KVA through 50 KVA. 3 phase to 2 phase (3 or 4 wire). Class "B" insulation, 80°C temperature rise. Dry type, air cooled. More KVA per pound. Write for catalog AC 185.

ACME ELECTRIC CORPORATION
302 WATER ST. CUBA, NEW YORK

Acme ACME Electric TRANSFORMERS

▲ For more details circle **NED-1265** on enclosed inquiry slip ▲

HOW TO IMPROVE YOUR PRODUCTS AT LOW COST

Design around Permaclad
STAINLESS CLAD STEEL

Now you can improve your products and equipment—give them gleaming corrosion resistance—without wasting critical materials. Design and build with PERMACLAD Stainless Clad Steel.

Full technical data and fabricating suggestions are yours for the asking. Write for your copy of our new 8-page folder—P-72.

FOR BETTER PRODUCTS AT LOW COST . . . SPECIFY PERMACLAD

STEEL SCRAP FIGHTS FOR DEFENSE. SELL YOUR SCRAP NOW!

PERMACLAD
STAINLESS CLAD STEEL
ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.
Over 125 Years of Iron and Steel Making Experience

Other Products: A.W. ALGRIP Abrasive Floor Plate • A.W. SUPER-DIAMOND Floor Plate • Plates • Sheets • Strip • (Alloy and Special Grades)

▲ For more details circle **NED-1266** on enclosed inquiry slip ▲

Illustration shows location of NOPAK Cylinders

"AIR DOGS" *Powered by* NOPAK Cylinders in "UNION" Log Carriage . . .

Specially built by Union Iron Works is this 6 ft. Band Headrig and Log Carriage, equipped with electric setworks and feedworks, installed at the Smith-Nielsen Mill, Spalding, Idaho. All of the "Air Dogs", however, are actuated by NOPAK Model "E" Air Cylinders, with Pendulum Mounting for oscillating movement.

This is one of many similar applications of NOPAK Cylinders and Valves, in heavy-duty lumber mill equipment. It may suggest how you can use air power effectively in vital machine movements . . . in your plant, or in equipment you build for your customers.

GALLAND-HENNING MFG. CO., 2755 S. 31st Street, Milwaukee 46, Wis.

Write for Bulletin SW-1, or refer to Sweet's File for Product Designers.

Representatives in Principal Cities

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE
A 6014-1/9AA

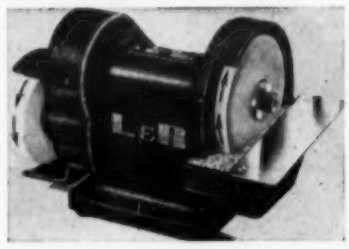
▲ For more details circle **NED-1267** on enclosed inquiry slip ▲

VAPO-LIQUID FIRE EXTINGUISHER
corrosion arrestor keeps fluid pure

These vapo-liquid 1-qt Quick Air Fire Guard extinguishers now have corrosion arrestor incorporated as part of the pump for keeping liquid pure and minimizing corrosion. Extinguishers are used on motor vehicles and in factories for on-the-spot protection against gasoline, oil and electrical fires. Bearing Underwriters' Laboratories approval rating B-2 and C-2, units also feature ease of operation. Made by **General Pacific Corp.**, Dept. N, 1501 E. Washington Blvd., Los Angeles 21, Calif.

▲ For more details circle **NED-1268** on enclosed inquiry slip ▲

CRYSTAL GRINDER
has grinding and buffing wheels



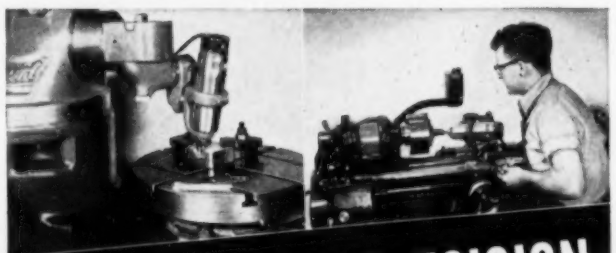
Developed for applications in instrument and allied manufacturing fields, this improved grinder for watch or instrument crystals is equipped with ball bearing motor with endless belt drive for quiet operation and easily removable water housing. The 5-in. grinding wheel operates at 1750 rpm and the felt buffing wheel at 2700 rpm. Machine operates on 110 v ac-dc and uses molded sponge for even distribution of water during crystal grinding. Made by **L & R Mfg. Co.**, Dept. NE, 577 Elm St., Arlington, N. J.

▲ For more details circle **NED-1269** on enclosed inquiry slip ▲

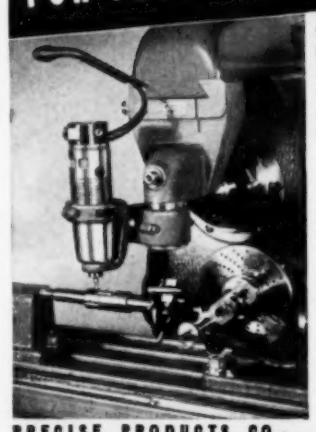
LIGHTING PANELETTES
with lugs or circuit breaker mains

Now available with either lugs or circuit breaker mains from 2 to 40 circuits are these NMO plug-in lighting panelettes for use on alternating current lighting and appliance branch circuit applications. Units incorporate thermal-magnetic plug-in circuit breakers rated at 15, 20, 30, 40 or 50 amp and mounted on cylindrical bus bars. Breaker units are interchangeable with those of the MO-12 and MO-20 load centers. Panelettes bear Underwriters' Laboratories approval and can be had for use on single-phase, three-wire or three-phase, four-wire alternating current systems. Made by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

▲ For more details circle **NED-1270** on enclosed inquiry slip ▲



LOWEST COST PRECISION FOR TOOL ROOM AND PRODUCTION



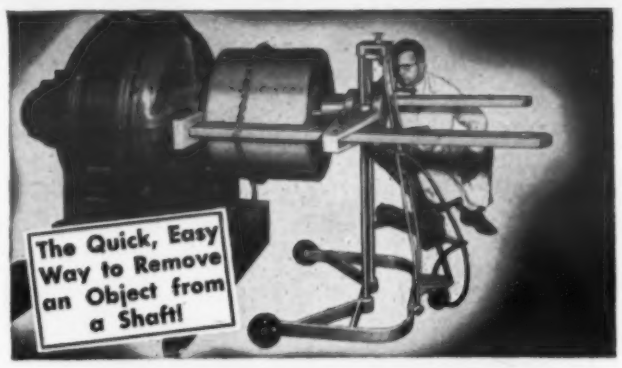
ONE PORTABLE MULTI-PURPOSE PRECISE GRINDER-MILLER WITH MACHINE TOOL MOUNT DOES THE WORK OF A SINGLE-PURPOSE MACHINE COSTING 100 TIMES AS MUCH!

Little can be done today to reduce labor and material costs. For substantial savings employ new, better techniques. Mount PRECISE Grinder-Millers on lathes, drill presses, milling machines and other machine tools or use in special production set-ups. ¼ HP; speeds from 20,000 to 45,000 r.p.m.; 115 volts, AC-DC. Ruggedly built for continuous duty. All metal housing; rigid PRECISE quill; sealed micro-precision bearings. *High speeds and accurate PRECISE quill and chuck are ideal for tungsten carbide cutters.* PRECISE will grind, mill or finish any material from soft wood to the hardest alloy steel.

Write FOR CATALOG
PRECISE PRODUCTS CO., 1346 Clark St., Racine, Wis.

PRECISE GRINDER-MILLERS

▲ For more details circle **NED-1271** on enclosed inquiry slip ▲



The Improved Hydraulic
PULLEY PULLER

For Removing Pulleys Wheels, Gears, Couplings Sheaves, etc.

ONE man can do it in minutes — even if objects are stuck fast. No crowbars, sledges or blowtorches. No damage to equipment. Puller is adjustable — easy to move — rugged. Hundreds being used in industry.

- 5-ton size on stand $62.50
- 5-ton size on wheels $92.50
- 20-ton size on wheels $290.00
- 50-ton size as shown $655.00

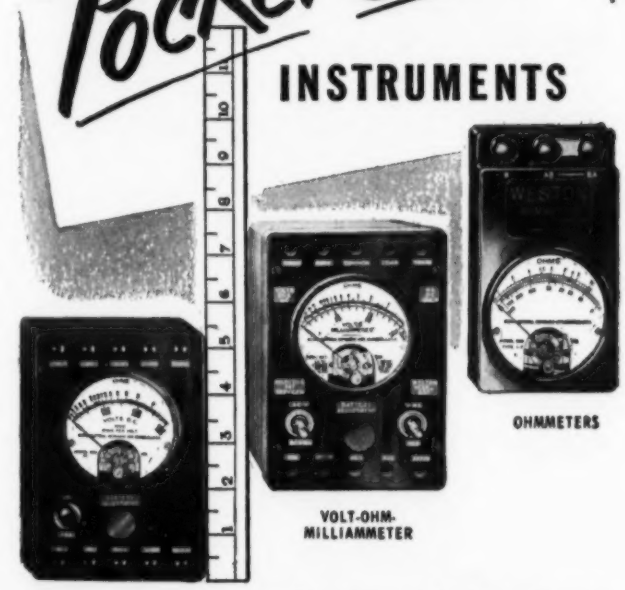
(F.O.B. Factory)

Write for complete information — Catalog E

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E. 4th St. Davenport, Iowa

▲ For more details circle **NED-1272** on enclosed inquiry slip ▲

VERSATILE *Pocket Size* INSTRUMENTS



—for maintenance

—for product testing

Extremely compact, yet packed with values for broad flexibility in service, these popular WESTON testers are favorites for checking electrical components . . . for production line testing . . . and for final inspections. Ideal for maintenance, too, because they offer true WESTON dependability and ruggedness in convenient size. Available now in limited quantities through your local WESTON representative, or, WESTON Electrical Instrument Corporation, 615 Frelinghuysen Avenue, Newark 5, New Jersey.

VOLT-OHMMETER—MODEL 564
Ranges—3/30/300/600 volts d-c (1000 ohms per volt).
Resistance—Full scale 1000/10,000/100,000/1,000,000 ohms.

VOLT-OHM-MILLIAMMETER—MODEL 697
Ranges—0-7.5/15/150/750 a-c and d-c (1000 ohms per volt).
Current—0-7.5/75 milliamperes d-c.
Resistance—Full scale 5000/500,000 ohms. Center scale 35/3500.

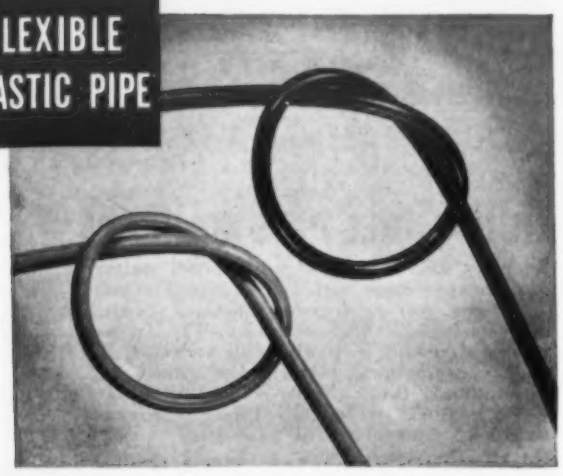
OHMMETERS—MODEL 689
Ranges—Type 1-E—double range 0-5000 and 50,000 ohms, full scale.
Type 1-F—double range 0-10 and 0-1000 ohms, full scale.

WESTON *Instruments*

▲ For more details circle **NED-1273** on enclosed inquiry slip ▲

JOHNSONITE FLEXIBLE PLASTIC PIPE

Here is the quality Plastic Pipe that can be tied in a knot, is 13 times lighter than ordinary pipe and is used everywhere. Corrosion-proof; acid-resistant; low-cost; excellent insulation material; lasts over 30 years; and easy to install.



Johnsonite has *proven* itself in the following applications and is being tried in new ones constantly:

Plating industry	Well installation	Chemical Processing
Cable covering	Irrigating golf courses	Beverage Processing
Industrial drainage	Municipal water systems	Electrical uses
Mines	Farms	Food Processing

JOHNSONITE Rigid Plastic Pipe is also available for special applications.

WRITE FOR OUR CATALOG FOR FURTHER DETAILS

JOHNSON PLASTIC CORP.
P. O. BOX 268 • CHAGRIN FALLS, O.

For more details circle **NED-1274** on enclosed inquiry slip

HOT PROBLEM? move it on a Simplicity conveyor

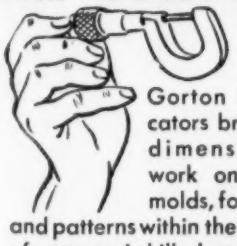
If you move hot, abrasive materials in your operations, you'll do it faster and more economically with either a Simplicity Os-A-Veyor (oscillating type conveyor) or a Model PT Positive Action Conveyor. Simplicitys are ruggedly built for tough duty. Simple power units and operating mechanism mean low maintenance costs and easy servicing. Model PT conveyors, built in lengths of 100', can be installed in multiples to meet any level-operation requirement. Os-A-Veyor types, available in lengths to 30' and 12" to 6' widths, will operate on an incline depending on product being handled. Simplicity conveyors give positive rate of feed control and handle all kinds of material, regardless of temperature and abrasive characteristics, without damage. Write, wire, or phone . . . today.

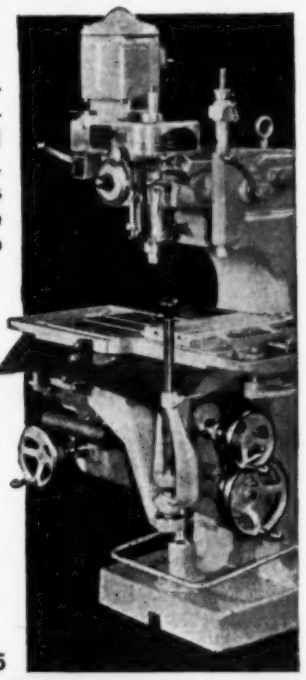
92

Simplicity
ENGINEERING CO., DURAND, MICH.

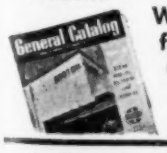
For more details circle **NED-1275** on enclosed inquiry slip

Cut Costs of Dies, Molds, Patterns with GORTON Tracer Control





Gorton Duplicators bring 3-dimensional work on dies, molds, forgings and patterns within the range of your semi-skilled men, who can obtain close tolerances with these highly sensitive machines. This Gorton Universal Duplicator has a tilting head and tracer and uses spindle speeds up to 10,000 r.p.m. — a machine that soon pays back its cost in reduced set-up time, finer work and stepped-up production — one of four models.



Write for free General Catalog 1655

GEORGE GORTON MACHINE CO.
1902 RACINE STREET • RACINE, WISCONSIN

For more details circle **NED-1276** on enclosed inquiry slip

SMALL INDICATING METERS
fit in 1⅝-in. panel mounting hole

Small indicating meters are available in ranges of 1 to 50 v, 1 to 30 amp and 10 to 1000 milliamperes. Readability and accuracy is not sacrificed in units which fit 1⅝-in. mounting hole. Previous models required 2 1/12-in. hole. Back panel clearance of 1 in. is required. Meters have accuracy of 5 per cent at any given point on scale, with 10 per cent overall accuracy. They are available for alternating or direct current service. Dull, black, wrinkle or nickel finishes are available. Made by **Sterling Mfg. Co.,** 9212 Detroit Ave., Cleveland 2, O.

For more details circle **NED-1277** on enclosed inquiry slip

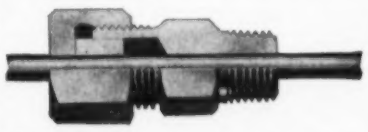
DEHUMIDIFIER
self-contained unit is portable

Measuring 1 ft square and 37⅞-in. high, model D-182 humidifier is equipped with casters for easy moving. Integral 8-qt galvanized moisture receptacle holds moisture removed from air, but unit can be attached to drain hose by means of ½-in. fitting in bottom. Unit removes 17 to 25 lb of water from 10,000 cu ft of air in 24 hours. The ⅛-hp refrigeration compressor operates on any 60-cycle, 115-v ac circuit. Moist air is drawn in through bottom, passed over evaporator coils, then drawn through condenser which heats and discharges it at room temperature for recirculation. Made by **Mitchell Mfg. Co.,** Dept. N-2, 2525 N. Clybourn Ave., Chicago 14, Ill.

For more details circle **NED-1278** on enclosed inquiry slip

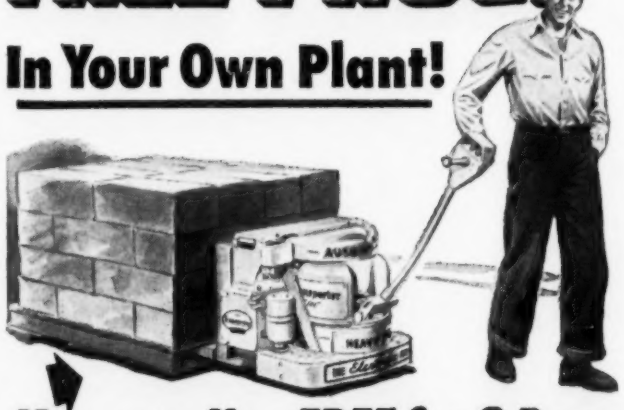
PACKING GLANDS
are made of stainless steel

Designed for general use and ease of installation in process control, pilot plant or laboratory applications, series of stainless steel packing glands is offered for tubes from ⅛ to 13/32-in. OD. Types PG-2 and PG-4 have asbestos-graphite packing and can be used as stuffing boxes or to seal static lines, thermocouple wells, dial type thermometer stems or any other round tubes or rods. Type PG-3 uses chemically inert powdered talc as sealant and can be used at temperatures up to 1400° F. Inside diameter is bored to customers' specification, and units are made of type 303 stainless. Made by **Conax Corp.,** 4513 Main St., Buffalo 21, N. Y.



For more details circle **NED-1279** on enclosed inquiry slip

FREE PROOF In Your Own Plant!



Yours to Use FREE for 3 Days

To Prove You Can Add Man-Hours Without Increasing Workload of Personnel

All industry is using this service-proved Electric Truck . . . a brawny midget of power that moves up to 6000 pounds with amazing "touch-of-the-finger" ease. It's saving industry millions of dollars every year, offers many features which mean better performance, less maintenance, lower operating costs . . . extra savings in smooth, trouble-free material handling. *But don't take our word for it!* Put "101" Transporter to the test . . . put it over the severest hauling hurdles *in your own plant, absolutely free and without obligation!* Write today and we'll arrange delivery for your 3 days' trial. First come, first served. No obligation to buy . . no strings attached.

"101" Transporter — A PRODUCT OF AUTOMATIC — Lightens Life's Loads

Trade Automatic Mark
61 West 87th Street, Dept. B-2, Chicago 20, Illinois

For more details circle **NED-1280** on enclosed inquiry slip

what type of **CUSTOM BUILT WIRE CLOTH PARTS** do you need ?

heat treating? pickling? plating? filtering? handling?

You can be sure of getting exactly what you need in custom built wire cloth parts when you call—**CAMBRIDGE.**

With more than 30 years experience in this field, we can work from your own prints . . . or, if none are available our design engineers will draw up prints based on your description of the job the part must do.

Our newly expanded production facilities include equipment for cutting, forming, bending, shaping and welding of any metal or alloy in sheet, rod, or wire cloth form . . . as well as our large battery of wire cloth looms.

Tell us your needs. Let us tell you how economically and quickly we can fill them. Write direct or call your Cambridge field engineer. Look under "Baskets-Wire" in your classified telephone directory.

FREE CATALOG describes Cambridge facilities for fabricating metal specialties. Write for your copy today.

The Cambridge Wire Cloth Co.
WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS
Department C
Cambridge 2, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle **NED-1281** on enclosed inquiry slip

• Prefabricated pallet racks by Equipment Mfg. Inc. permit stacking to conserve floor space without tying up low level material. They are engineered for strength, safety and flexibility. There's a type to suit your particular needs.

Write for our catalog. It illustrates all types.

EQUIPMENT MFG. INC.
21566 Hoover Road Detroit 5, Mich.

For more details circle **NED-1282** on enclosed inquiry slip

INVINCIBLE Flux Recovery Units

These installations soon pay for themselves by (1) saving labor, (2) salvaging valuable material, (3) making the welding operation more efficient. Both automatic and manual systems.

Write for complete information

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

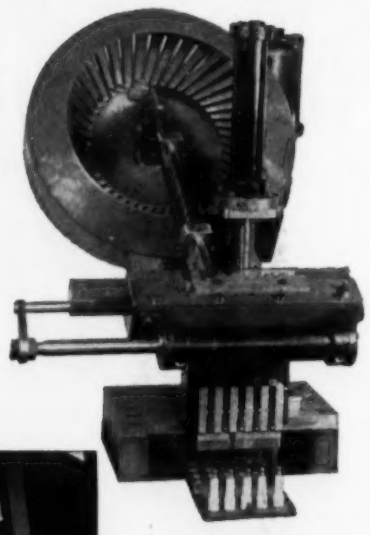
▲ For more details circle NED-1285 on enclosed inquiry slip ▲

Don't Handcuff Valuable Manpower!

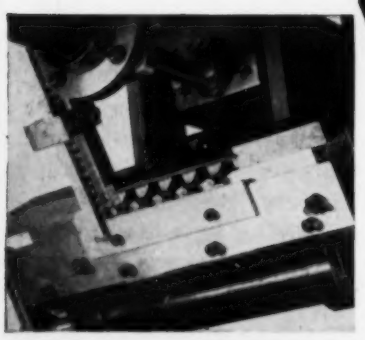
FREE IT FOR MORE IMPORTANT WORK—BY USING

DPS *Motorized* HOPPER UNITS

Modern production demands the speed and accuracy of this great aid to SELECTIVE FEEDING. It makes slow, manual methods obsolete and releases "frozen" manpower for more productive work. D.P.S. Motorized Hopper Units select, orient and feed production parts of a wide variety to a given position for primary and secondary operations. They are readily adaptable to all types of standard production equipment and special machines that would otherwise require constant attention by an operator.



SEE US AT THE A.S.T.E. SHOW MARCH, CHICAGO



These illustrations show an interesting application, previously a problem of manual loading. Five terminals were to be inserted into the spark plug bodies simultaneously as the carrier progressed into the furnace for the firing operation. The carrier plates, illustrated, had equally spaced receiving holes drilled five abreast and were moved along an indexing conveyor with a momentary pause beneath the ram of the special inserting machine. At this pause the transfer slide (close-up) transferred five terminals into proper vertical position, at which time index of the conveyor cycled the machine and an air cylinder inserted the studs into the spark plug bodies, eliminating the manual insertion of the terminal studs.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICH.

▲ For more details circle NED-1286 on enclosed inquiry slip ▲

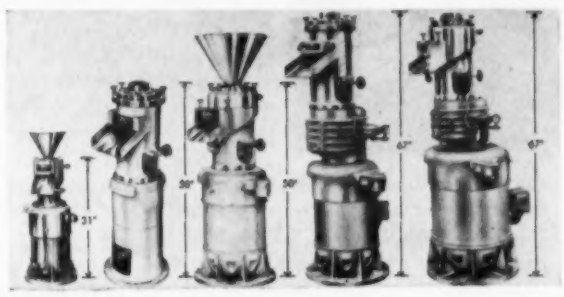
LEATHER EXECUTIVE CHAIR is adjustable for maximum comfort

Because it is fully adjustable by means of handwheels, model 4012-1/2 AF executive posture chair provides custom-fit for any individual. Offered in walnut, mahogany or oak finish, chair has molded foam rubber cushioning in shaped back and in seat. Upholstered arms, back and sides of seat are top-grain leather, while the top of the seat is finished in Bedford cord fabric to retain full softness and resilience of the foam rubber. Spring controlled tilting back and seat are adjustable to assure comfort, whether user is sitting erect or leaning back. Ball bearing swivel is employed, and nonbreakable Tenite scuff plates protect base. Full-floating ball bearing casters are standard. Made by **B. L. Marble Chair Co.**, 48 Willis St., Bedford, O.

▲ For more details circle NED-1287 on enclosed inquiry slip ▲

CHEMICAL MILLS output from five models varies from 320 to 5000 gal per 8 hours

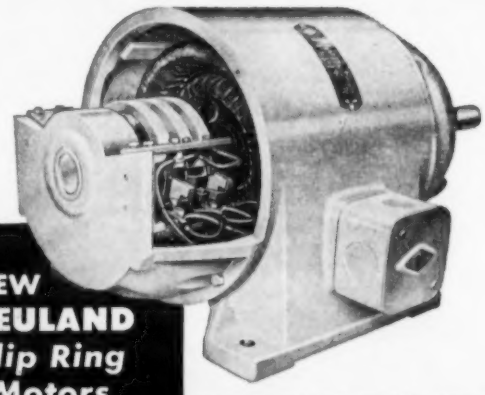
Five models in improved line of high speed vertical stone milling equipment have mill proper, all moving parts and accessories, including plumbing, made of acid resistant



stainless steel. Processing chamber is polished and meets all sanitary requirements. Mills can perform grinding, emulsifying, dispersing, homogenizing, disintegrating and blending operations and can be provided with constant velocity type pump operated by variable speed motor for moving material to be processed from premix tanks to mills and from mill to storage tanks or filling machines. Models are available without stainless steel parts for variety of noncorrosive products.

Following models are available: 3-hp model MS with capacity up to 320 gallons per 8-hour day; 10-hp model SS-25, with capacity of 2000 gallons; 20-hp model SS-30 with capacity up to 2000 gallons; 20 to 40-hp model SS-2025 with capacity up to 5000 gallons per 8 hours; and 20 or 40-hp model SS-2030, with capacity up to 5000 gallons per 8 hours. On four larger capacity models, an externally handwheel controlled micrometer adjusting device permits rotor stone to be raised or lowered. Made by **Morehouse Industries**, Dept. M, 1156 San Fernando Rd., Los Angeles 65, Calif.

▲ For more details circle NED-1288 on enclosed inquiry slip ▲



NEW REULAND *Slip Ring Motors*

FEATURE SHORTER OVERALL LENGTH VERSATILE, FLAT END BELLS

Reuland Slip Ring Motors provide both (1) variable speed and (2) high starting torque on low starting current. Ideal for crushers, cranes, fans, etc.

FLAT END BELLS permit easy, direct-mounting of equipment on either end.

SHORTER LENGTH assures simpler mounting in tight spaces. (Same dimensions as a squirrel cage motor.) Greater shaft rigidity is obtained through shorter bearing-to-bearing spacing.

WITH GEAR REDUCERS Reuland Slip Ring Motoreducers provide maximum versatility.

AVAILABLE in drip-proof or totally enclosed designs. Wide range of ratings.

Write for engineering folder covering the complete Reuland Line—No. RE-2000-2

Inquiries invited on special motors designed to order.

REULAND ELECTRIC CO.
ALHAMBRA, CALIFORNIA • DISTRIBUTORS IN PRINCIPAL CITIES

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WHAT'S IN THIS PIPE?
YOU KNOW WHAT'S IN THIS ONE
CITY GAS

YOU CAN TELL AT A GLANCE WITH

QUIK-LABEL PIPE MARKERS

Identify every pipe in your plant quickly and inexpensively with Brady Pipe Markers. They give you a uniform system of identification based on ASA Standard A13. Anyone can apply and everyone can identify the pipe contents and direction of flow. Cut maintenance time. Make your plant a safer place to work. Over 235 different markers in stock. Specials made to order.

QUIK-LABELS come on handy dispenser cards. They are printed in large black letters on approved ASA background colors. Applied in a jiffy—they stick without moistening. Use indoors or outdoors. Cost only a few cents per marker.

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MANUFACTURERS OF SELF-STICKING PRODUCTS

W. H. BRADY COMPANY EST. 1914

1623 E. SPRING STREET • CHIPPEWA FALLS, WIS.

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WM. M. WILSON'S SONS, INC.
MANUFACTURERS OF GASBOYS, KERO-BOYS, OILBOYS, ROTABOYS
GENERAL OFFICES AND PLANT AT LANSDALE, PA.

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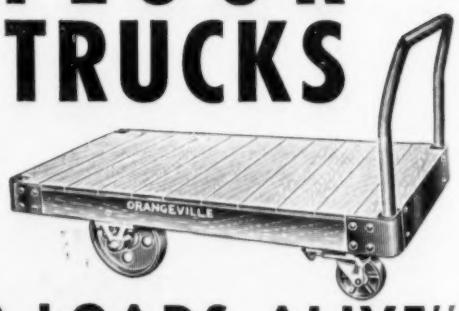
FLOOR TRUCKS



"KEEP LOADS ALIVE"

STANDARD SIZES & TYPES
SPECIAL DESIGNS
VARIOUS TYPE WHEELS:
IRON-RUBBER—PNEUMATIC

Write for catalog

ORANGEVILLE MFG. CO.
Orangeville 12, Pa.
"Since 1879"

FLOOR TRUCKS ORANGEVILLE

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Complete Line of HEAD BLOCKS WINCHES COUNTERWEIGHT SYSTEMS

Loads ranging from a few pounds to 40 tons and more must be hoisted and moved quickly and safely on the theatre stage. The complete line of head blocks, hand and motorized winches and counterweight systems — all standard catalog items — which J. R. Clancy, Inc. has supplied for the stage for 76 years is available to meet the many similar requirements of modern industry.

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Theatrical Equipment Division

J. R. CLANCY INC.

1020 W. BELDEN AVE., SYRACUSE 4, N. Y.

For more details circle **NED-1293** on enclosed inquiry slip

- Pump Controls
- Duplex Pump Alternators
- High and Low Level Cutoffs
- High and Low Level Alarms
- Multi-level Signals
- Liquid Metering
- Special Controls and Panels

Write For 32 Page Catalog • Some Territories Still Open

CHARLES F. WARRICK CO.

1964 W. Eleven Mile Rd.
Berkley, Mich.

Warrick FLOATLESS LIQUID LEVEL CONTROLS ELECTRODE TYPE

For more details circle **NED-1294** on enclosed inquiry slip

UNIVERSAL INDUSTRIAL CONVEYOR

Low First Cost . . . . Low Maintenance

- Removable sides to permit handling large cartons or parts.
- Motor totally enclosed inside conveyor body easily accessible through removable ventilating panel.
- Elevates to desired height with simple hoisting mechanism.
- Driven by means of roller chain to roller bearing equipped gear box.
- Main drive shaft and idler pulley operate on double-sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 74 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

For more details circle **NED-1295** on enclosed inquiry slip

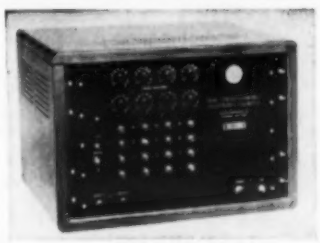
LOW TEMPERATURE CABINETS
two models create temperatures down to 95° and 85° F below zero

Applications calling for shrink fits, seasoning of gages and precision tools, and testing metals and materials at below-zero temperatures can be served with Sub-Zero chest. Equipped with a sub-lid for maintaining constant temperature throughout compartment, cabinets are available in 1.5 and 6.5 cu ft models for controlled temperatures down to 90° and 80° F below zero respectively. Minus 95° and 85° F are possible by continuous running.

Air and watertight inside and out, chests have thick Fiberglas bat insulation. Storage compartment for small unit measures 23 x 9 x 12½ in., while larger cabinet has 47 x 15 x 16-in. space. Refrigeration system consists of two Tecumseh hermetic compressors operating a ¾-hp two-stage system. Current required is 110-120-v, 60-cycle, single-phase ac. Made by **Revco, Inc.**, Dept. NED, Deerfield, Mich.

For more details circle **NED-1296** on enclosed inquiry slip

DUAL ELECTRONIC COUNTER
slows down cycle for operation of shears, gates and other devices



Developed for applications where rate of material flow is extremely rapid, this dual electronic counter predetermines two different selected counts occurring in sequence. Dual predetermined feature facilitates slowing down in final stage of cycle to obtain satisfactory operation of gates, shears and other devices. When count of parts on high speed conveyor belt approaches selected batch total, belt speed is reduced by electronic counter to permit precise actuation of these devices.

In processing continuous strip material, counter measures length in terms of drive shaft revolutions. Switch is made from high to low speed just before shearing for uniform and accurate cutting. Model 243 counter continuously recycles and accepts counts up to 1000 per second. Resetting is instantaneous without missing a count. By dial switch setting, any two numbers from 1 to 9999 can be chosen as counting points at which control actuation is to occur. Made by **Potter Instrument Co.**, 135 Cutter Mill Rd., Great Neck, N. Y.

For more details circle **NED-1297** on enclosed inquiry slip

DO YOU KNOW? Applicable to office desks and equipment, decalcomania type combination 1952 calendar and linear and pica ruler is being offered free. Easily applied, decal is colorful and durable. Offered by Palm, Fechteler & Co., Dept. N, 220 W. 42nd St., New York 18, N. Y.

For more details circle **NED-1298** on enclosed inquiry slip

WIRE SX PRODUCTS

MAGNET WIRE WITH THE WORKABILITY FOR FAST, LOW COST WINDING

Here's wire of proved workability when subjected to the punishment of modern high speed winding—whether random or layer. It helps insure freedom from broken wires, crossed turns, runbacks, spaced turns and frequent tension adjustments.

Essex Extra Test has the good slip necessary in coil winding. Slides evenly and smoothly in place, resulting in maximum turns in minimum space and in coils that will pack tight. When used for motor armatures, no matter how narrow the slots, Essex extra abrasion resistance reduces rejections.

When you specify Essex Extra-Test Magnet Wire for any winding job you can be sure.

ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *Atlanta, Ga., *Boston, Mass., *Chicago, Ill., Cleveland, Ohio, Dallas, Texas; Dayton, Ohio, Detroit, Mich., Indianapolis, Ind., *Kansas City, Mo., *Los Angeles, Calif., Milwaukee, Wis., *Newark, N.J.; Pittsburgh, Pa., *Portland, Ore., Upper Darby, Philadelphia, Pa., *Saint Louis, Mo., *San Diego, Calif., *San Francisco, Calif.

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Engrave

. . . PANELS UP TO 25" WIDE IN YOUR OWN SHOP WITH THE NEW ENGRAVOGRAPH Portable Model 1-S

The only portable machine which reproduces 15 sizes from one master alphabet.

The only one with *adjustable* copy holding slides for multiline engraving in one set-up.

Self-centering holding vise for nameplates.

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I-S26—portable model
H-26—heavy duty model

NEW HERMES, Inc. new hermes Engravograph
13-19 University Pl. N. Y. 3, N. Y.
CANADA: 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

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Today's Best Buy is Better Air!

Electro-Mist controls oil mist from thread grinder: Lear, Inc., Grand Rapids.

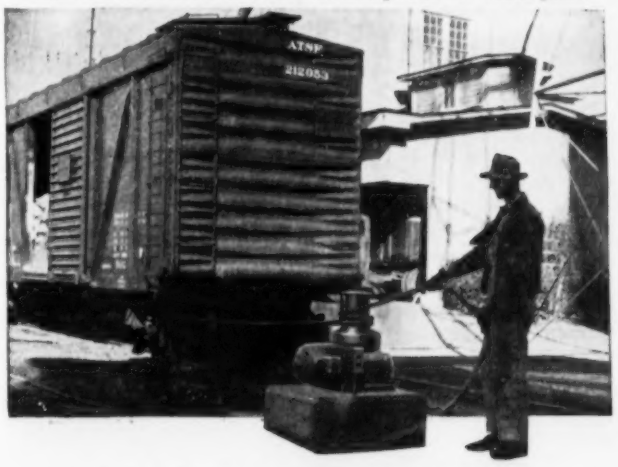
SAFETY INSURANCE
for high speed cutting and grinding

Electro-Mist eliminates coolant hazards from high speed cutting and grinding. This specially designed unit prevents dispersion of oil mist and smoke and collects both by electronic precipitation. Easy access to all parts . . . without tools. Salvages 2 to 5 gallons coolant daily. Now made in two sizes to meet any capacity requirement. Write today for Engineering Bulletin No. 251.

AAF **American Air Filter** COMPANY, INC.
391 Central Ave., Louisville 8, Ky.
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle **NED-1301** on enclosed inquiry slip

Link-Belt CAR SPOTTER releases manpower for other jobs



Get faster car spotting

Reduce switching and demurrage time to a minimum. One man with two or three turns of rope around the motor-driven capstan will handle up to six loaded railroad cars. Available with 5 or 10 hp, integral or separate motors, stationary or portable.

Link-Belt offers a complete line of car spotters . . . also specializes in drum type puller applications.

12,385-C

WRITE TODAY
For 16 Page Bulletin 1992-A

LINK-BELT COMPANY:
Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in Principal cities.

For more details circle **NED-1302** on enclosed inquiry slip

WANTED!

1000 PLANT EXECUTIVES

TO TEST THIS PLASTIC ENVELOPE FREE Worth 26c

Test this FREE Job Ticket Envelope in your plant. See how production records, job orders, charts, etc. stay crisp and clean despite constant handling. Now, you can eliminate doubts, errors and wasted time due to blurred, grease-stained figures . . . . at extremely low cost.

AMERICAN KLEER-VU PLASTICS, INC.
57 Thames St. Brooklyn 37, N. Y.

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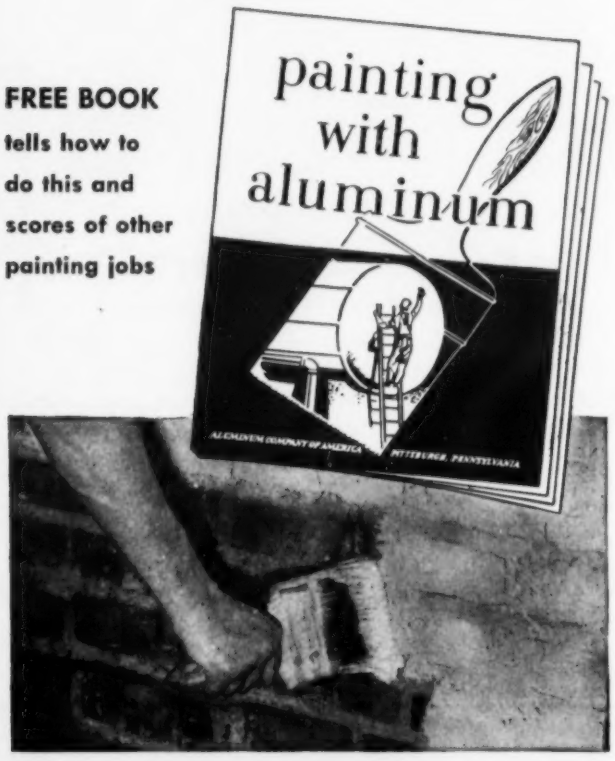
How to brighten dark rooms with One Coat

FREE BOOK tells how to do this and scores of other painting jobs



31 PAGES OF USEFUL PAINTING INFORMATION

NEW FREE BOOK TELLS HOW to get better paint results at lower cost . . . how to buy and apply the right aluminum paints.

Alcoa does not make paint. We have prepared this book so you can know about the many new improvements in aluminum paints; can buy the correct paints without lengthy specifications and tests; can apply them best for lasting protection and good appearance.

This book gives worth-while maintenance painting tips; includes coverage tables, tells what aluminum paints to use inside and out, on wood, metal, masonry and heated surfaces. Send for your free copy. Attach the coupon to your letterhead and mail now.

ALUMINUM COMPANY OF AMERICA
Paint Service Bureau, 1788B Gulf Bldg., Pittsburgh 19, Pa.
Please send me a free copy of: *"Painting with Aluminum"*.

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Look for this shield on aluminum paints made by many paint manufacturers using ALCOA PIGMENTS.
The RIGHT aluminum paint for this job is ALUMINUM METAL & MASONRY PAINT.
ALCOA ALBRON

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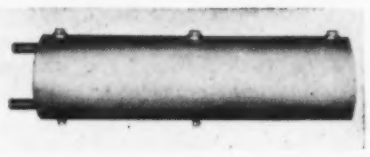
POLARITY RECEPTACLE
for standard single outlet plates

Designed for heavy industrial use, No. 1240 20 amp, two-wire T-polarity flush receptacle will accommodate all standard single outlet plates. It prevents blown fuses and other mishaps that occur when parallel-blade cap is mistakenly inserted into receptacle of much higher amperage. Molded Bakelite unit is rated at 20 amp, 250 v and is Underwriters' listed. Also available are No. 1202 two-wire polarity cap and No. 2220 cord connector. Made by **Rodale Mfg. Co.**, Minor St., Emmaus, Pa.

▲ For more details circle **NED-1305** on enclosed inquiry slip ▲

HEAT EXCHANGERS
heat and cool liquids and vapors



Possessing basic rating of from 98 to 1760 Btu per hour, line of HX-Changer heat exchangers can be used for heating and cooling any combination of liquids and vapors. Use can be for converting air-cooled compressors to water-cooled service, refrigerant condensers, combination water-cooled condenser-receiver, water chiller using refrigerant as cooling medium or heating oils, chemicals, water and other liquids with steam. Units are made with 6⅝-in. and 8⅝-in. shell. Body is ASME welded construction and coil tubes are copper on all sizes, except for oil treating when case steel coil is furnished. All units are tested under 350 psi pressure. Made by **Rempe Co.**, 362 N. Sacramento Blvd., Chicago 12, Ill.

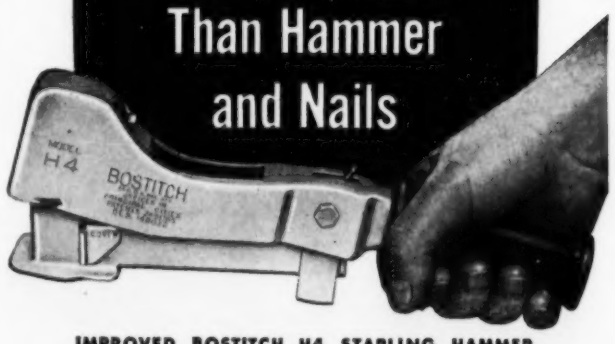
▲ For more details circle **NED-1306** on enclosed inquiry slip ▲

HIGH SPEED GRINDER
air model has speed of 70,000 rpm

Weighing only 12¼ oz, model O Desoutter air grinder is designed for continuous operation at any speed from near 0 up to 70,000 rpm. Perfectly balanced, tool has low air consumption at all speeds. Speeds are controlled by pushbutton with spring lock. All moving parts are heat treated nickel-chrome-molybdenum steel and all bearings are ball or roller. Each grinder is equipped with six mounted grinding points, two chuck wrenches, one head wrench, 10 ft of hose, spare jet plate and dressing stone. Shaped, disk and cylindrical grinding wheels from ⅛ to ⅞-in. can be used with tool. Available from **Newage International, Inc.**, Dept. G, 235 E. 42nd St., New York 17, N. Y.

▲ For more details circle **NED-1307** on enclosed inquiry slip ▲

Four Times Faster Than Hammer and Nails



IMPROVED BOSTITCH H4 STAPLING HAMMER, with knuckle protector, is now better than ever for speeding up fastening and cutting costs. It's stronger and easier to use. *What power!* Each easy blow drives a sturdy ¾" staple all the way home...staple legs spread inside the work, putting them under tension for increased holding power. *What speed!* One blow per staple . . . one hand free for holding work . . . quick, easy loading . . . no nail juggling. A *free* trial will convince you that this improved Bostitch H4 stapling hammer will save you time, labor and money. WRITE FOR BULLETIN 212. BOSTITCH, 732 Mechanic St., Westerly, R. I.

BOSTITCH® fastens it better, AND FASTER with wire
ALL TYPES OF MACHINES FOR APPLYING STAPLES
ALL TYPES OF STAPLES APPLIED BY MACHINES

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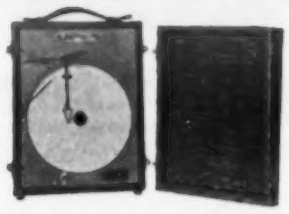
ANOTHER W&T PRECISION INSTRUMENT

THE PORTABLE DIRECT CURRENT RECORDER



FOR MEASUREMENT OF MICRO CURRENTS

The New W&T Portable Direct Current Recorder permits direct recording of minute electrical currents and voltages. Brief specifications are:

Type	Moving Magnet, Interchangeable coil.	Scale Length / Chart Diameter	2½ inches. / 8 inches.
Sensitivity	1 part in 1000 of full scale range.	Chart Speed	1 revolution per 24 hours.
Minimum Range	0 to 100 microamperes.	Case	Highly finished hard wood.
Maximum Range	0 to 6.0 amperes.	Size	13" high by 10⅛" wide by 5½" deep.
Coil Adjusting Range	2.5 to 25 ampere turns.	Weight	10 pounds.

Write today for complete details — there's no obligation

WALLACE & TIERNAN PRODUCTS, INC.
ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey • Represented in Principal Cities
A-89

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SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire—no shock.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

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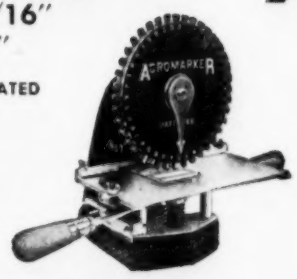
ACROMARK MEANS "ACCURATE MARKING"

THE ACROMARKER NAME PLATE AND PARTS STAMPING MACHINE COMES IN SIZES FROM 1/16" TO 3/16"

HAND OPERATED AND FOOT MODELS



NON-TIRING FAST-MAKES PERFECT STAMPING OF LETTERING & NUMBERING EASY AS DRIVING A CAR

DIE WHEELS AND DIES ARE REPLACEABLE.

The ACROMARK Company
7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

▲ For more details circle **NED-1311** on enclosed inquiry slip ▲

Wheeler lights the way ...to INCREASED DEFENSE PRODUCTION!

Step-up output with *specialized* Wheeler Fluorescent Fixtures! Their greater lighting efficiency pays off in higher quality . . . *increased production* — on every job, in every type of plant condition.

Write Wheeler Reflector Co.,
275 Congress St., Boston 10, Mass.

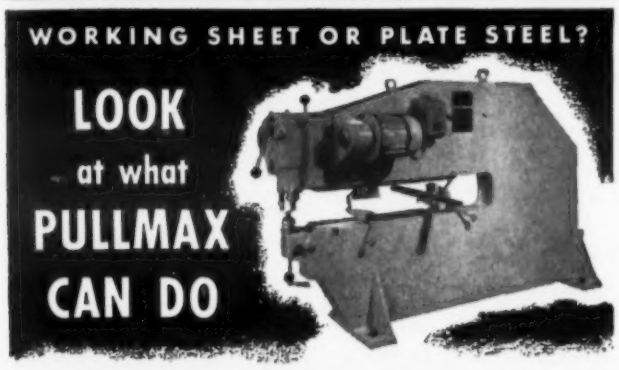
Wheeler REFLECTORS — Distributed Exclusively Through Electrical Wholesalers

MADE BY SPECIALISTS IN SEALED LIGHTING EQUIPMENT SINCE 1881

▲ For more details circle NED-1312 on enclosed inquiry slip ▲

WORKING SHEET OR PLATE STEEL?

LOOK at what PULLMAX CAN DO



STRAIGHT CUTTING — Straight cutting, circle cutting, free hand cutting, slot cutting, beading, folding, louvering and many variations of these operations . . . ALL ON ONE PULLMAX MACHINE! Easy to set up and change tools . . . seven sizes of machines work materials up to 11/32" in mild steel . . . also works stainless steels, non-ferrous metals, wire mesh and plastics.

CIRCLE CUTTING — WRITE FOR LITERATURE — FOLDING

SLOT CUTTING — BEADING — FREEHAND

PULLMAX—A complete sheet and plate working shop in one machine.

AMERICAN PULLMAX CO., INC.

2457 N. SHEFFIELD AVE. CHICAGO 14, ILLINOIS

▲ For more details circle NED-1313 on enclosed inquiry slip ▲

LISTEN TO YOUR COMPRESSOR

frequent running costs you money!

CHAMPION

aero-dynamic design . . . cuts running time 6 ways!

Compressors that run too frequently cost you money! Excessive running causes excessive wear, raises electric costs by increasing consumption, and slows work through reduced pressure. Champion Air Compressors are Aero-Dynamically engineered to deliver cool air to the receiving tank in a minimum of running time. Get all the facts on Champion's Aero-Dynamic Compressor design.

this FREE MANUAL shows you how to select the proper air compressor. Write for your copy TODAY!

5784

CHAMPION PNEUMATIC MACHINERY CO.

837 N. Pleasant Street Princeton, Illinois

PRESSURE CLEANERS · AIR HOSE REELS · AIR ACCESSORIES

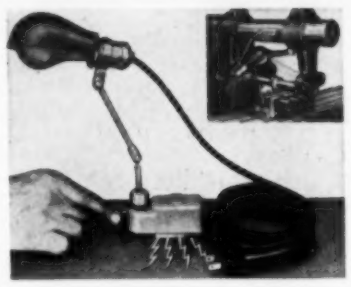
▲ For more details circle NED-1314 on enclosed inquiry slip ▲

LATCH TYPE FASTENER for engine hood and other closures

Model A utility fastener is a heavy duty unit designed for fastening engine and compressor hoods, access doors and covers of all types of industrial equipment. It operates on spring clamp principle common to the well-known automobile hood clamp on earlier models. It measures 3¾ x 2⅜ in. overall and is finished in black enamel. Formed principally of stampings, clamp can be equipped with various types of mountings to suit application. Made by **Wilco Products, Dept. E, 1216 W. Market St., Louisville 3, Ky.**

▲ For more details circle NED-1315 on enclosed inquiry slip ▲

MAGNETIC BASE LIGHT holds up to 100-w standard bulb

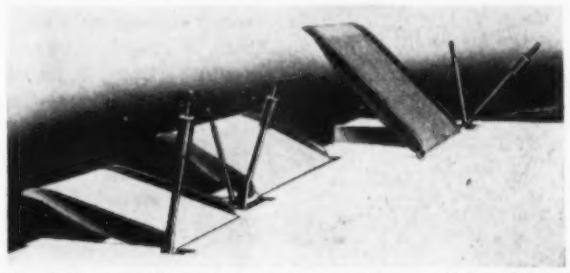


Attaching to curved or flat surfaces with approximately 100 lb pull, Miti-Mite No. 250 magnetic base light will hold up to 100-w standard base incandescent bulb. Ball and socket bracket permits directing light wherever needed. Outside of aluminum lamp shield is flocked to resist heat and protect user's eyes. Six feet of oil-resistant 18-2 Neophyne cord is included. Magnetic base holder is made of nonbreakable molded plastic and measures 4 x 1¼ x 1⅝ in. It is equipped with magnet release. Made by **Enco Mfg. Co.**, 4524 W. Fullerton Ave., Chicago 39, Ill.

▲ For more details circle NED-1316 on enclosed inquiry slip ▲

ADJUSTABLE LOADING DOCK designed for light duty service

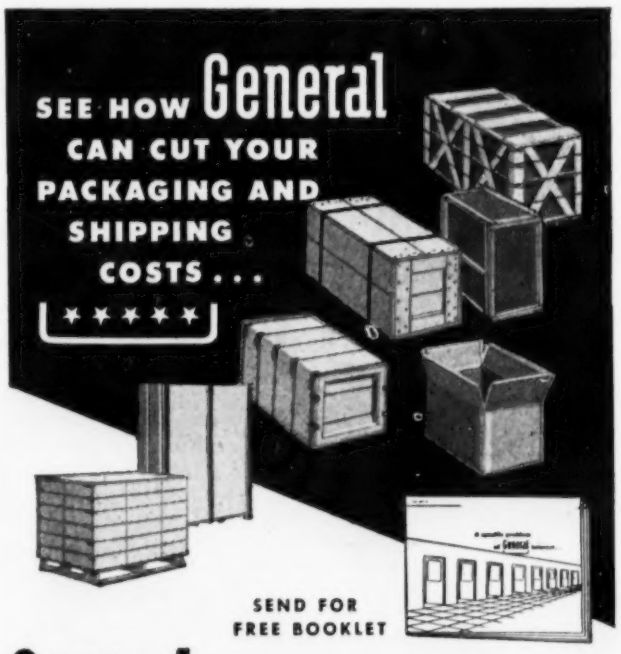
Rated 10,000 lb and measuring 42-in. wide by 48 in. long, model 48 Rite-Hite adjustable loading dock is manually operated and fully counterbalanced. When not in use,



dock plate remains in any set position. When lowered to floor of carrier being loaded at dock, plate remains in positive contact throughout its 18-in. vertical adjustment range. Shown in illustration, left to right, are model 48, 42-in. 10-ton and 72-in. 10-ton models. Made by **Karl A. Herman Co.**, 333a W. Fulton St., Grand Rapids, Mich.

▲ For more details circle NED-1317 on enclosed inquiry slip ▲

SEE HOW General CAN CUT YOUR PACKAGING AND SHIPPING COSTS . . .



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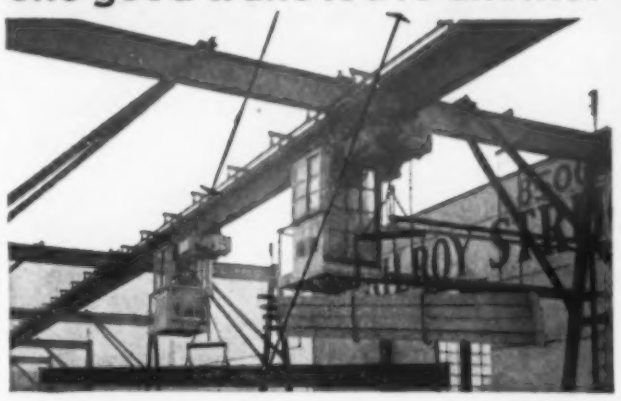
General BOX COMPANY

GENERAL OFFICES: 1857 MINER STREET, DES PLAINES, ILL.

DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, General Box Company of Mississippi, Meridian Miss., Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas.

▲ For more details circle NED-1318 on enclosed inquiry slip ▲

one good crane led to another



...at Kilroy Structural Steel Co.

of Cleveland, Ohio, who installed a 5-ton Robbins & Myers enclosed cab traveling crane to handle raw steel and prefabricated components in their storage yard three years ago. When they needed another crane —they simply reordered "R & M".

Moving 125 tons of steel is an ordinary days work for this R & M team, and in a recent 3-day period, with assists from 16 two-ton hoists inside the plant, handled 400 tons of steel from raw stock through fabrication and to transport for the customer!

Kilroy's manager, Mr. McGreal, says R & M equipment gives lower cost, fast, efficient handling;—stays on the job with only routine maintenance despite rugged all weather use. Even if your biggest load never tops 500 lbs. it will pay you to take it up with Robbins & Myers. Your nearby R & M representative has full details on time and cost saving overhead handling that will successfully answer your needs. Write for Bulletin No. N22D.

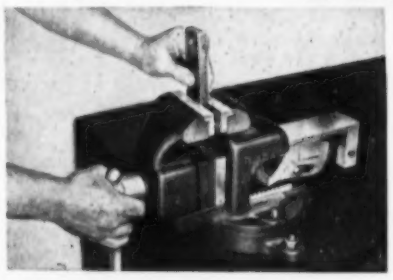
TAKE IT UP WITH ROBBINS & MYERS INC.

HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

▲ For more details circle NED-1319 on enclosed inquiry slip ▲

NEW! DODGE SLIDE-SET VISE

Cut away view



SLIDES IN "NEUTRAL"!
INSTANT ACTION!
GRIPS CONVENTIONALLY!
FULL POWER!

● Entirely new in principle, with patented fast slide action that speeds work, reduces operator fatigue, saves wear on parts. All the power of a heavy conventional vise (weighs 58 pounds). Jaw slides in "neutral" before you lock it by turning handle in conventional way. No tedious "spinning" in and out. No-Pinch handle protects against blood blisters. Every Dodge Slide-Set pays dividends in greater efficiency and production. *Write now for free Bulletin.*

Dodge Manufacturing Corporation, 2100 Union St., Mishawaka, Indiana

DODGE of Mishawaka, Ind.

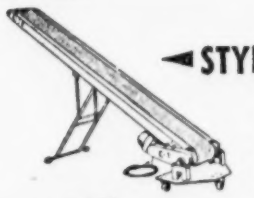
▲ For more details circle NED-1320 on enclosed inquiry slip ▲

Here's your Best Buy in PORTABLE BELT BOOSTERS

ADJUSTABLE • REVERSIBLE • COMPACT • ECONOMICAL

STYL-O-VEYOR SR.

Portable units to help speed up loading and unloading of freight cars, trucks, etc., stacking of cases, conveying from one level to another. Two models are available—the heavy duty Senior, and the light duty Junior.



STYL-O-VEYOR JR.

Styl-O-Veyors are universal conveyors, capable of being fed or discharged from either end. The angle of height is quickly adjustable by hydraulic power and hand winches within.

MAIL THIS COUPON FOR FULL DETAILS

FREE!

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North
Long Island City 1, N. Y. Dept. NE-2

Please send Bulletin HP20-2A on Styl-O-Veyor Portable Belt Boosters.

NAME _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle NED-1321 on enclosed inquiry slip ▲

TOPS IN THE SHOPS

for safety, sure grip and up to 10 times longer wear

Super-tough coating of red NEOX, the reinforced neoprene that resists cutting, abrasion, grease, chemicals.

Positive non-slip grip. Seamless palm and thumb. Comfortable fabric lining, wide thumb span, curved fingers.

Specially recommended for metal working and finishing—handling, cleaning, dipping, plating, degreasing and sand-blasting.

Redmont No. 934

General work glove with long-life, natural rubber "tread"

3 to 5 times longer wearing than leather palm gloves on many rough jobs; sure-gripping, wet or dry. Comfortable fabric, coated on palm and thumb or over-all with tough rubber that safely resists cutting, tearing and severe abrasion.

FREE TEST OFFER: Send brief description of your operation. We will forward proper gloves for on-the-job test.

Grab-it No. 62

Edmont Edmont Manufacturing Company, 1240 Walnut St., Coshocton, Ohio

World's largest maker of coated gloves for railroad workers

For more details circle **NED-1323** on enclosed inquiry slip

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Aerovent FAN

EXTENDED SHAFT FAN

KEEPS MOTOR OUT OF AIR STREAM

Extended shaft may be water jacketed, if desired. Sizes 12" to 84". 2, 4 or 6 Blades.

For industrial applications where it is desired to keep the motor out of the air stream to meet Underwriter's specifications for exhausting explosive vapors. It protects the motor from high temperature air, corrosive fumes, or combination of obnoxious fumes and moisture.

Certified Ratings — Air Deliveries are in accordance with Standard Test Code for Centrifugal and Axial Fans — PFMA

Other Models

Direct Connected, Man Cooling, Duct Type, Belt Driven, Pulley Driven. Sizes 12" to 144".

Write today for

ENGINEERING BULLETIN

AEROVENT FAN CO., INC.

ASH and BROWN STREETS, PIQUA, OHIO

Competent Sales Engineers in Principal Cities

For more details circle **NED-1324** on enclosed inquiry slip

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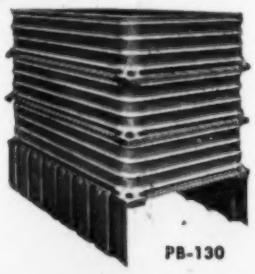
HEADQUARTERS for materials handling equipment

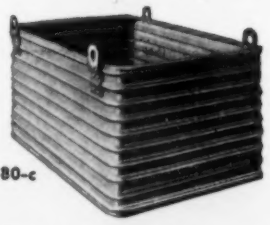
The success of modern production methods depends upon the efficiency with which materials and products in various stages of fabrication can be handled.

Truscon's Pressed Steel Division—nationally known for the quality of its products and the dependability of its service—is fully equipped and prepared to handle your material handling equipment requirements. The Pressed Steel Division's central location, moreover, assures efficient service for all your needs.



PB-130

Descriptive catalog on TRUSCON STEEL BOXES & SKIDS free on request!



B-80-c

TRUSCON Steel Company

PRESSED STEEL DIVISION • 6206 Truscon Ave., Cleveland 4, O.

Subsidiary of Republic Steel Corporation

For more details circle **NED-1325** on enclosed inquiry slip

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FIBERBOARD INSERTS for tote boxes protect parts

Highly finished parts being transported in NesTier stacking-nesting tote boxes can be protected from damage by fiberboard inserts which fit in boxes. Inserts are available in either four-partition egg crate type or without partitions. Two sizes fit each of two tote box sizes shown in photograph. Inserts and boxes made by **Charles William Doepke Mfg. Co.,** Dept. NED, Rossmoyne, O.

For more details circle **NED-1326** on enclosed inquiry slip

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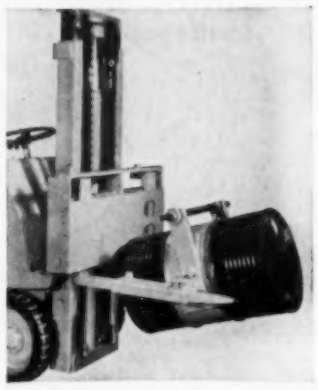
DRUM UP-ENDER fork truck attachment empties drums



Heavy 55-gallon drums can be safely emptied from any height within arm reach of worker by manual drum up-ender attachment for fork lift trucks. It consists of two shoes which slip over forks of any standard fork truck. To shoes are welded rubber-faced grab plates that clamp around drum to hold it firmly. Arm on each shoe supports handle used to up-end drums for emptying. Drums are carried in vertical position and can be tilted forward to horizontal position for stacking or 45 degrees below horizontal for emptying. Made by **Baker-Raulang Co.,** Baker Industrial Truck Div., 1245 W. 80th St., Cleveland 2, O.

For more details circle **NED-1327** on enclosed inquiry slip

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HOBBING PRESS used primarily for die quenching

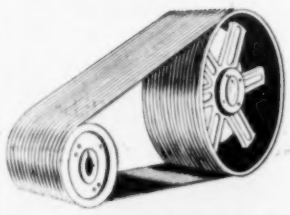
Although commonly used for sinking desired impressions into blocks of prepared steel, this 2500-ton capacity press will see use in die quenching, an operation involving quick-cooling of hot forgings while restrained in die under extremely high pressure. Process maintains maximum accuracy while developing high physical properties. Press is 10 ft 8 in. high, has left-to-right clearance between columns of 39 in., maximum platen-to-head opening of 32 in. and stroke of 15 in. Advance speed is 10 ipm, press speed is ½-ipm and return speed is 20 ipm (gravity). Made by **American Steel Foundries,** Elmes Engineering Div., 1150-C Tennessee Ave., Cincinnati 29, O.

For more details circle **NED-1328** on enclosed inquiry slip

---

CONGRESS SHEAVES and V-BELTS

- Precision built. Soundly engineered. Widely used as original equipment by hundreds of the largest manufacturers of such appliances as washing machines, dryers, laundry equipment and air conditioning installations.
- Congress FHP pulleys are available in attractive 3-color individual boxes, with pulley outside diameter and bore size plainly marked. Simplifies storing-selling.



Immediately Delivery From Stock

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CONGRESS DIAMOND BORED **DRIVES**

3750 E. OUTER DRIVE, DETROIT 34, MICH.

For more details circle **NED-1329** on enclosed inquiry slip

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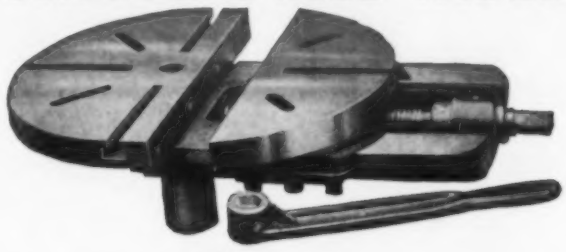
Try the MODERN

SAFETY DRILL TABLE



For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made in 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

MODERN MACHINE TOOL CO.

Jackson, Michigan

For more details circle **NED-1330** on enclosed inquiry slip

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THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling — Saves Die Costs Saves on Expensive Presses

The illustration at the left shows just a few pieces produced on our famous Multiform Bender-Cutter. This efficient machine is useful in all lines of trade.

NO. 5 AIR MODEL

ALSO BUILT IN LARGER SIZES

HAND OPERATED MODELS AVAILABLE

FIVE-IN-ONE-TOOL

IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE. CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

For more details circle **NED-1331** on enclosed inquiry slip

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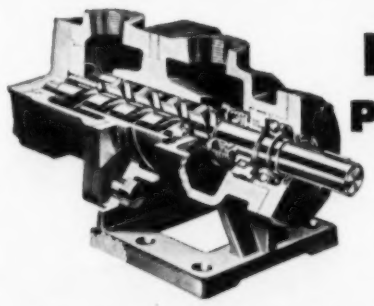
Now . . . a new low-cost IMO FOR HIGHER PRESSURES



Note simplicity of unique IMO design—only three moving parts. IMO is reliable, quiet, pulsation-free, compact, excellent for high-speed operation.

You've either heard about or used the proven De Laval–IMO A313A pump. Now De Laval brings you the A313B IMO for a wide variety of oil handling applications for higher pressures. This quality-designed, quantity-produced pump saves you up to 40% in initial cost over other IMO models for pressures up to 275 psi. • This new rotary positive displacement pump gives you all the advantages of the famous IMO pumping principle. Use it for capacities to 80 gpm, pressures to 275 psi and intermittent pressures to 325 psi . . . It handles light or viscous fluids in hydraulic systems, rotary and steam atomizing oil burners, lubrication, governing systems and similar services. DL 184A

De Laval Offers Immediate Delivery of this New IMO Pump! Write Today!

DE LAVAL *IMO Pumps*

STANDARD PRODUCTS DIVISION

DE LAVAL STEAM TURBINE CO., TRENTON 2, N. J.

For more details circle **NED-1332** on enclosed inquiry slip

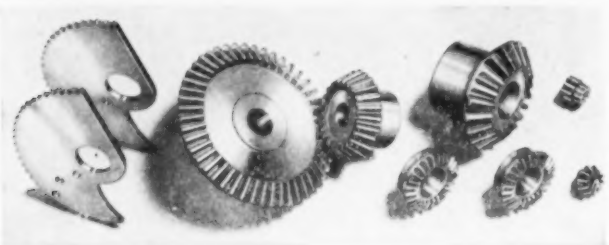
VARGLAS permafil SLEEVING

Shortly after our first announcement of Varglas Permafil Tubing, engineers began praising its many features — especially its extra flexibility and toughness.

Now, for the first time, Varglas Permafil Sleeving is available in N.E.M.A. grades C-2 and C-1. This new sleeving is lighter coated than the Permafil Tubing but it frequently does the insulating job where tubing was formerly used — and, of course, the cost is much less. Available in coils. Write for free test samples and prices.

VARFLEX CORPORATION
310 Jay St. Rome, N.Y.

For more details circle NED-1333 on enclosed inquiry slip



Rynel fractional h. p. **Gears**

For All Small and Medium-Sized Gear Applications

Controlled Blank to Finished Gear

Rynel Certified Gears are made exactly to your specifications. Accuracy, tooth form and finish are controlled from the start with accurately formed blanks from our own gear blanking department. Experienced gear men cut true tooth forms with the latest precision equipment. Finished quality is checked by skilled gear inspectors. • That's why designers, engineers and product development men recognize Rynel Certified Gears for quality and dependability.

SPUR • HELICAL • WORM • WORM GEAR
INTERNAL • SEGMENT • SPROCKET • RATCHET
FINE PITCH • STRAIGHT-TOOTH BEVEL GEARS

Send For Our Latest Bulletin

Rynel Corporation
302 MILLER ST., STERLING, ILLINOIS

For more details circle NED-1334 on enclosed inquiry slip

SAVED $3,044 OVER COST OF ELEVATOR

WRITE— for Suggestion. Give height, floor to floor and horizontal space available . . . Also maximum unit load.

- Maintenance — Zero
- Operating Cost — Negligible
- 500% Faster Loading and Unloading
- Safer than Elevator
- Flexible, with two-way Controls
- Prompt Delivery — Easy Installation

METZGAR CO. METZGAR CONVEYORS

MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES • REEL DOLLIES & END-WOOD WHEELS.

416 Douglas N.W.
GRAND RAPIDS 4, MICH.

For more details circle NED-1335 on enclosed inquiry slip

MOLDED BOX TYPE TRUCK made with one-piece body

Light in weight and easily cleaned, line of molded Fiberglas trucks has one-piece bodies that are non-conductive to static electricity and capable of withstanding chemicals used in such processes as dyeing and finishing yarn. All corners have curved radius. Trucks are made in sizes for handling up to 3500 lb and are available with choice of several caster types. Made by **Laminex Corp.**, 994-N Jefferson St., Fall River, Mass.

For more details circle NED-1336 on enclosed inquiry slip

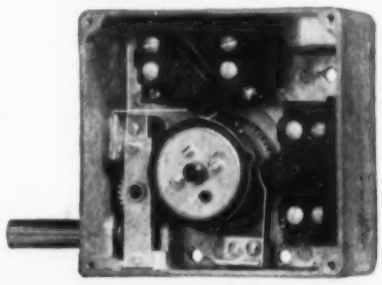
THERMOMETER ELEMENTS attached to surface by cement

Fast response to surface temperature is provided by two RdF Stikon bonded type resistance thermometer elements. Types BN-3 and BN-4 have long life, high operating temperature range and are attached by Bakelite cement. Units are suited for continuous service from −100 to 300° F, with short runs to 400° F possible without damage. Charts and tables facilitate conversion of resistance readings to temperature in degrees Centigrade or Fahrenheit. Instrumentation can range from Wheatstone bridge to fully automatic indicating, recording and controlling equipment. Use can be on rotating shafts, propellers and other moving parts, as elements can be used in conjunction with slip rings. Made by **Ruge-de Forest Inc.**, Dept. NED, 84 Massachusetts Ave., Cambridge 39, Mass.

For more details circle NED-1337 on enclosed inquiry slip

ROTATING-TYPE LIMIT SWITCH coordinates reversing with drive rpm

Rotating type limit switch for coordinating reversing operations with number of motor shaft or drive revolutions can be used to control motor-operated doors and windows, machine tool valves, baling operations or machinery travel limits. Switch consists of two size-2 Switchettes, each having one normally-open and one normally-closed circuit. Units operate independently by cams rotated through worm and gear reduction from shaft extending outside case. By turning slotted adjusting pins (one for each cam) switch can be adjusted for operation from 4 to 110 turns of driving shaft with 5 turns over-travel in either direction. Zinc die-cast case measures 4 x 4 x 2 in. Watertight and explosionproof forms are available. Made by **General Electric Co.**, Schenectady 5, N. Y.



For more details circle NED-1338 on enclosed inquiry slip

CONTROL POWER BETTER

ROCKFORD CLUTCHES

For more details circle NED-1339 on enclosed inquiry slip

HERE'S ECONOMICAL Wound Rotor Motor Control

THIS COMBINATION of primary and secondary control for your wound-rotor motors will give you dependable, economical control . . . smooth acceleration and positive speed regulation.

PRIMARY CONTROL. Type 371 Wall Mounted Starters are designed for space saving, low original cost installation. Operating costs are kept down by rolling-wiping contact action, low inertia moving parts, and a completely oil-immersed mechanism that is sealed from the atmosphere.

SECONDARY CONTROL. Allis-Chalmers Type 9410 starting duty drum switches have four balanced control points . . . speed regulating switches have five. Both have radial and thrust ball bearings on each end of the shaft for easier, smoother operation.

Bulletin 14B7274 describes Type 371 starters for 2300-volt motors of 350 hp or less. Call your A-C representative or write Allis-Chalmers, Milwaukee 1, Wis. for this bulletin and more information on Type 9410 drum switches.

ALLIS-CHALMERS A-3531

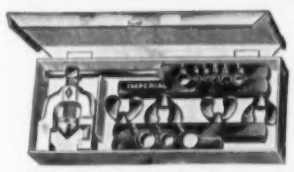
For more details circle NED-1340 on enclosed inquiry slip

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

60% SAVINGS ON SOME ITEMS

OVER 9,000 ITEMS including

- ELECTRIC MOTOR PARTS
- REFRIGERANTS & FITTINGS
- DEEP FREEZER SUPPLIES
- DEHYDRATORS
- COPPER TUBING
- VALVES
- CONTROLS
- HIGH SIDES
- GAUGES
- TOOLS



Wide Range FLARING Tool

Flares 9 different sizes. One bar flares 1/8", 3/16", 1/4", 5/16", 3/8" and 7/16" OD sizes and the second bar flares 1/2", 5/8" and 3/4". Yoke has "slip on" feature with the inside edges notched to hold in place. Self centering No. 13564B. Complete Wide Range Flaring Tool for 9 different sizes, in metal case.

WRITE TODAY TO

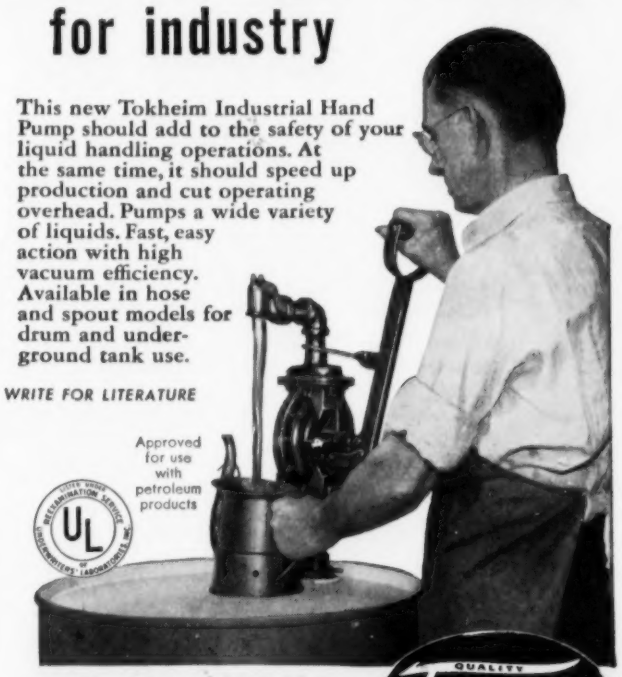
THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-1341 on enclosed inquiry slip

SAFER liquid handling for industry

This new Tokheim Industrial Hand Pump should add to the safety of your liquid handling operations. At the same time, it should speed up production and cut operating overhead. Pumps a wide variety of liquids. Fast, easy action with high vacuum efficiency. Available in hose and spout models for drum and underground tank use.

WRITE FOR LITERATURE

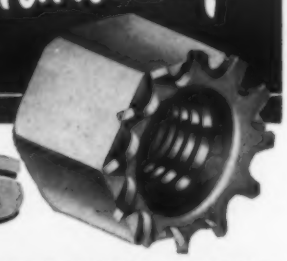


General Products Division
TOKHEIM OIL TANK AND PUMP COMPANY
1656 Wabash Ave., Fort Wayne 1, Ind.
Factory Branch: 1309 Howard St.
San Francisco 3, California

QUALITY TOKHEIM DOUBLE-ACTION HAND PUMPS

For more details circle NED-1342 on enclosed inquiry slip

Try This Amazing New Shakeproof Fastening!



KEPS
TRADE MARK

The pre-assembled nut and "SHAKEPROOF" Lock Washer

Two parts are handled as one . . . lock washers can't drop off. Every nut is locked tight by the powerful tapered-twisted locking teeth of a "SHAKEPROOF" Lock Washer.

INCREASE PRODUCTION AND CUT COSTS WITH KEPS. WRITE FOR FREE TESTING SAMPLES AND KEPS DATA BOOK TODAY!

SHAKEPROOF inc.
Division of Illinois Tool Works
2501 North Keeler Avenue, Chicago 39, Illinois

For more details circle **NED-1343** on enclosed inquiry slip

A Platecoil has more heat transfer area than a pipe coil twice its size. Thus it takes only half as much Platecoil to heat a given area. You have 50% less steel to pay for so you can save nearly 50% in initial cost. The Platecoil takes only half as much space in the tank. The greater BTU transfer per unit area of Platecoil also means faster heating or cooling. Platecoils require less maintenance and can be removed without dumping the solution.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL
Division
KOLD-HOLD MFG. CO.
LANSING 4, MICHIGAN

For more details circle **NED-1344** on enclosed inquiry slip

Photo shows plate glass pushed against resilient air-inflated wheel. Note large abrasive contact area—up to 3000% more! This means a corresponding production increase.

. . . how to INCREASE BUFFING, POLISHING PRODUCTION 3000%

● You can boost your buffing and polishing output up to 3000% on flat work . . . and 600 to 700% on contours . . . by using this resilient air-inflated wheel. Many other advantages such as—*no chatter or bounce . . . eliminates under-cuts . . . produces a straight pattern similar to a hand finish.* For use on portable tools or bench-stands—wherever ordinary polishing wheels are used. Send NOW for free literature and name of distributor nearest you. Nu-Matic Grinders, Inc., 8223 Carnegie Ave., Cleveland 3, Ohio.

send for full information TODAY!

NU-MATIC
Air-Inflated
GRINDERS

For more details circle **NED-1345** on enclosed inquiry slip

SIGHT-FEED LUBRICATOR
for air and steam powered tools

Adequate lubrication of tube cleaners and other air and steam powered tools is assured by sight-feed lubricator which requires no adjustment once set. It is actuated entirely by pressure or operating air or steam. When operating pressure is off, oil flow is shut off tight. Rate of oil flow is controlled by knurled cap on top of unit. Oil is replenished by removing filler plug. Although designed for tube cleaner service, lubricator can be used on many other types of equipment. Two sizes are made—1 pint and 1 quart capacities. Made by **Elliott Co.,** Roto Div., Dept. N, 145 Sussex Ave., Newark 1, N. J.

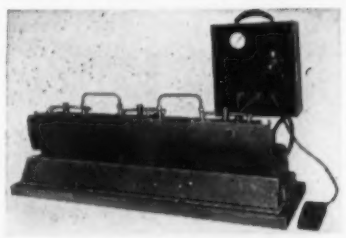
For more details circle **NED-1346** on enclosed inquiry slip

TOOL HOLDER
made for follower or tracer lathes

Developed for use on follower or tracer lathes and capable of cutting in either direction, lathe tool holder designated as DTRL has 55-degree diamond-shaped solid Wessonmetal insert. Ample clearance is provided on both sides of diamond insert to permit multicutting action. Carbide insert is held by tempered steel band—the only part subject to wear. Band is replaceable at nominal charge. Tool provides maximum cutting edge clearance of 35 degrees in straight shoulder turning and has two cutting edges. Holders can be used on either or both sides of work, right side up or upside down. Locking, adjusting and changing of inserts is by adjusting screw on top of holder. Made by **Wesson Co.,** Ferndale, Mich.

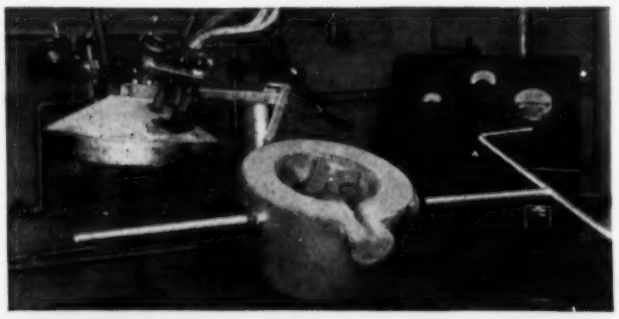
For more details circle **NED-1347** on enclosed inquiry slip

HEAT SEALER
has 250 to 500° F heat range



Heat, pressure and dwell-time can be adjusted on Sentinel heat sealing equipment to provide good heat seal on any heat-sealable barrier material. Capillary leaks due to wrinkles, splices and contamination are eliminated. Pneumatically-operated equipment has dial for setting pressure at point of seal and thermostat for controlling temperature in range of 250-500° F. Dwell-time is regulated in fractions of a second. Sealing operation is activated by remote control switch that can be operated by hand, foot, automatically or synchronized with other moving equipment. Once action is started, cycle is automatic. Photo shows 3-ft multiple unit with control cabinet and remote control switch at right. Models are available in lengths from 1 to 24 ft. Made by **Packaging Industries,** 50 Church St. N.E., Montclair, N. J.

For more details circle **NED-1348** on enclosed inquiry slip



For lab melts, pilot plant and small production . . .

The PT POT TILTING Furnace

This Detroit Electric Furnace has been specially developed to produce small melts of any metal with ease, economy and speed. 15-pound capacity pot can be used as a crucible or tilted to pour directly into molds. Roof lifts and swings for easy loading. Complete with controls. Full information on request.

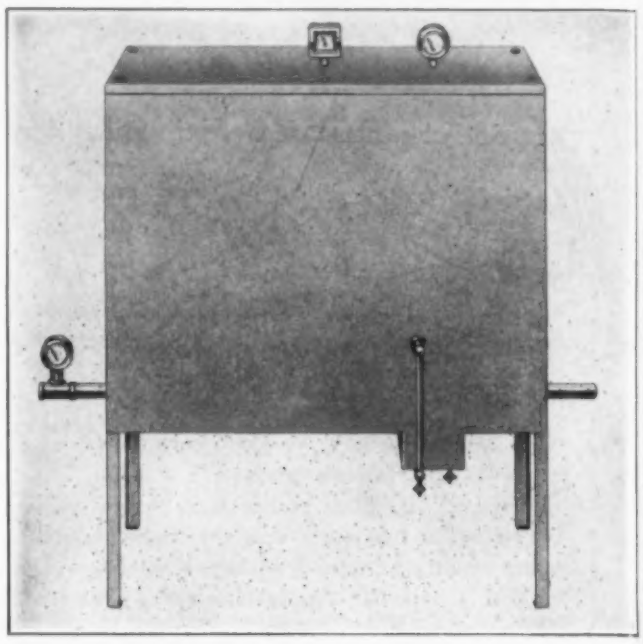
WRITE FOR DETAILS

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

Foreign Representatives: In BRAZIL—Equipamentos Industrias "Elsa" Ltd., Sao Paulo; CHILE, ARGENTINA, PERU and VENEZUELA: M. Castelvi Inc., 150 Broadway, New York 7, N. Y.; MEXICO: Casco, S. de R. L. Atenas 32, Despacho 14, Mexico City, D. F. EUROPE: ENGLAND, Birlec, Ltd., Birmingham.

For more details circle **NED-1349** on enclosed inquiry slip

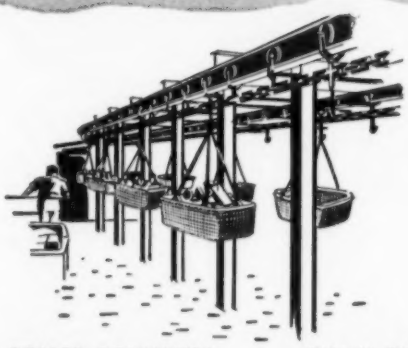
NEW HOUDAILLE WATER-OIL SEPARATO
Maintains Clean, Dry Oil . . . Pr



Simplicity of design and efficient, economical operation are featured in Honan-Crane's new Houdaille Water-Oil Separator for hydraulic, turbine, quenching oils, etc.—any oil

For more details circle NE

Mathews Trolley



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ROLLER CONVEYERS • CHAIN CONVEYERS • LIVE RO
ELEVATING CONVEYERS • BELT CONVEYERS • LER SP
SPECIAL CONVE G MAC

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MATHEWS CONVEYER COMPA
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Engineering Offices or Sales Agencies i

For more details circle NE

Multi-duty box masterind

BOOSTS PRODUCTION!

THIS Work-O-Matic Box increases materials handling efficiency—boosts production and reduces costs—more than any box you've ever used. It does all the usual box jobs—moving and tiering unit loads. But see what *more* it does!

When fork-lifted onto Union Metal's specially designed Positioning Stand, the drop bottom automatically discharges parts into a tray—at work-level height!

When the Work-O-Matic Box is empty, it is replaced with a loaded one *without interrupting work*—because the tray still holds an ample supply of parts. Result—operator and machine receive a *continuing* supply of materials. No waiting. Costly downtime is cut.

Get full details. Write for illustrated Folder MH-809 and typical T & M Studies—*see* how you can save! The Union Metal Manufacturing Company, Canton 5, Ohio.

Work-O-Matic Box and Stand Patent No. 2,445,038. Other patents pending.

UNION METAL
Materials Handling Equi en

For more details circle NE

ongs Safe-Use Life Indefinitely

purification problem where water is a troublesome factor.

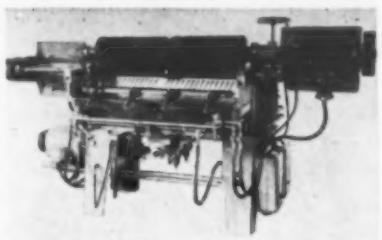
The **Separator** reduces water content of the oil to an insignificant trace, approximately one-tenth of one percent. Provides for the first time, a simple, practical method of separating water from oil.

New unit eliminates the necessity for changing or discarding oil regardless of the type of contamination encountered. This is possible because it **performs a complete filtering service**, removing solid contamination, acids, and other sludge-forming products of oxidation, **as it separates** the water. Continuous operation of the Separator on by-pass circulation keeps the oil in safe operating condition indefinitely.

The **Separator** has a filtering unit, thermostatically controlled heating and settling tank with specially designed metal screen, and an oil purifying unit employing either fullers earth or cellulose fibre. Unit is easy to install, simple to operate. Both inlet and outlet pipes of Separator easily connected by a single plug to any convenient electrical outlet. **Equipment Bulletin with complete details available on request. Write today to Honan-Crane Corporation, a subsidiary of Houdaille-Hershey Corp., 405 Wabash Ave., Lebanon, Indiana.** Advt.

▲ For more details circle NED-1351 on enclosed inquiry slip ▲

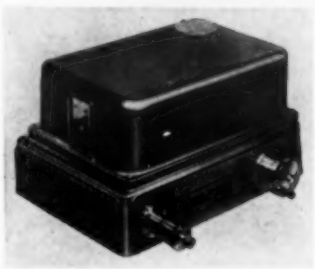
SURFACE FINISHING MACHINE
stroke adjustable from ¾ to 24 in.



Spoon handles, pliers, surgical instruments and similarly shaped products are given high finish on production basis with this model 208 surface finishing machine. Use of batch handling technique allows batches of work to be transferred as units. Machine has automatic in and out stroke which is adjustable from ¾ to 24 in. Air circuit provides automatic float of buffs at any predetermined pressure. In addition to integral safety feature, unit can be equipped with controls to stop machine upon completion of predetermined numbers of strokes from 1 to 400. Made by **Clair Mfg. Co.**, 1003 S. Union St., Olean, N. Y.

▲ For more details circle **NED-1353** on enclosed inquiry slip ▲

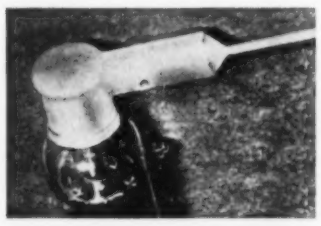
DOUBLE-PASS MONOCHROMATOR
for photometric chemical analyses



For use wherever pure source of chopped monochromatic light is needed such as in photometric chemical analyses, model 99 double pass monochromator makes use of new optical principle which permits double monochromator performance with single monochromator simplicity. system reflects radiation twice through same optical system. Instrument is usable throughout entire range of ultraviolet, visible and infrared regions of spectrum (2000 angstroms to 40 microns) with suitable prisms. Resolution is better than ½-angstrom at 2500 angstrom with quartz prism and scattered radiation is less than 0.1 per cent throughout entire range. Made by **Perkin-Elmer Corp.**, Danbury Rd., Norwalk, Conn.

▲ For more details circle **NED-1354** on enclosed inquiry slip ▲

TUBE CAP CONNECTOR
has integrally molded resistor



A ½-watt resistor of any resistance is integrally molded in 90 ISRL series of high voltage, low loss tube cap connectors. Technique which saves space and reduces weight molds grid cap insulation, resistor insulation and wire insulation into one homogeneous unit. Danger of arc-over or insulation pull back is eliminated. Clip consists of two smoothly curved surfaces that fit almost entirely around grid cap. With polyethylene, polyvinyl and Kel-F (for temperatures up to 150° F continuous operation) insulating materials available, connectors can be applied to high temperature, high voltage, low loss requirements. Made by **Alden Products Co.**, 117 N. Main St., Brockton 64R, Mass.

▲ For more details circle **NED-1355** on enclosed inquiry slip ▲

▲ For more details circle **NED-1357** on enclosed inquiry slip ▲

● Ames micrometer dial indicators are the most modern available today — and naturally so because Ames policy for over 50 years has been continually to improve design, to take advantage of new materials and to utilize the most advanced manufacturing methods. They are a real aid to the quality control engineer who is trying to keep pace with today's high production schedules.

Because Ames Indicators are functionally designed, they have fewer parts than ordinary indicators. Construction is simple with functional parts being larger and more rugged and adequately supported. Operational friction is at a minimum. Thus, Ames Indicators combine extreme sensitivity and accuracy with the ability and endurance *to stay right on the job longer.*

Representatives in principal cities. **B. C. AMES CO.** 54 Ames Street Waltham 54, Mass.
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle **NED-1358** on enclosed inquiry slip ▲

ey Conveyers

GINEERED TO SERVE PRODUCTION"

● One of the many widely applied types conveying equipment designed and built Mathews Conveyer Company.

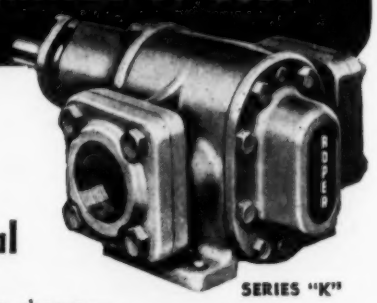
The complete line of Mathews designed—the built Conveyers includes the owing:

• LIVE ROLLER CONVEYERS • WHEEL CONVEYERS
• ROLLER SPIRAL CONVEYERS • PORTABLE CONVEYERS
CONVEYING MACHINERY

WS CONVEYERS
GENERAL OFFICES
COMPANY . . . . . ELLWOOD CITY, PENNSYLVANIA
PACIFIC COAST DIVISION
COMPANY WEST COAST . . SAN CARLOS, CALIFORNIA
CANADIAN DIVISION
COMPANY LTD. . . . . PORT HOPE, ONTARIO
Offices in Principal American and Canadian Cities

▲ For more details circle NED-1351 on enclosed inquiry slip ▲

ROPER rotary PUMPS
DEPENDABLE SERVICE FOR A WIDE RANGE OF USES



• Quiet
• Efficient
• Economical

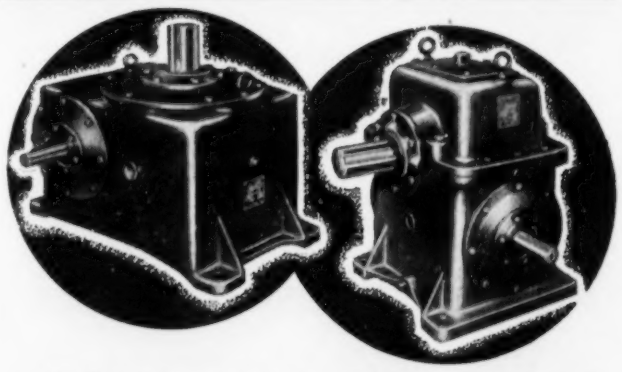
SERIES "K"

The *Series K* pump shown — for hydraulic service and fuel supply — is one of four standard models in the Roper line. Others include: *Series F* for use with clean liquids of all kinds; *Series H* for high pressure applications, especially hydraulic mechanisms; and *Series 3600* for general purpose work handling thin or thick liquids. Roper Pumps are noted for quiet operation, high volumetric efficiency, and ruggedness coupled with compact design. Models are standard fitted or bronze fitted; can be supplied with or without built-in relief valve. Sizes range from 3/4 to 300 G.P.M. — Pressures to 1000 P.S.I. Send for catalog to know complete details.

GEO. D. ROPER CORP.
662 Blackhawk Park Ave.
Rockford, Illinois

ROPER Rotary Pumps

▲ For more details circle **NED-1356** on enclosed inquiry slip ▲



HYGRADE WORM GEAR DRIVES

. . . assure smooth, trouble-free operation and better power transmission.

New developments in manufacture provide precision generated gears which give improved performance and greater load-carrying capacity.

Available in horizontal, vertical and Hytop designs. Ratios up to 4108 to 1 or higher when required.

Write for Bulletin HGA

FOOTE BROS. GEAR AND MACHINE CORPORATION
Dept. NE. 4545 S. Western Blvd. • Chicago 9, Illinois

FOOTE BROS.
Better Power Transmission Through Better Gears

▲ For more details circle NED-1359 on enclosed inquiry slip ▲

rinds materials handling

▲ For more details circle NED-1352 on enclosed inquiry slip ▲

VULCAN
ELECTRIC SOLDERING TOOLS

SCREW TIP

Standard Sizes
7/16"—½"—⅞"
1⅛"—1⅜"
1⅝"—1¾"

U.L. Approved

Men to whom soldering is an every-day job have found Vulcan Screw Tip Soldering Tools fast and efficient.

Light weight, with cool, adjustable birch handles, shaped to fit the hand, they have the "hang" or balance that makes expert soldering easy.

Tips are of finest forged copper. Complete with 6 ft. heater cord and unbreakable rubber plug.

VULCAN ELECTRIC CO.
Danvers 15, Mass.

Vulcan Electric Soldering Tools, Solder Pots, Glue Pots, Branding Irons. Vulcan Electric Heating Elements.

For more details circle **NED-1360** on enclosed inquiry slip

Rugged! Rigid! Accurate! Economical!

LOW COST OPERATION HIGH PRODUCTION MILLING MACHINES

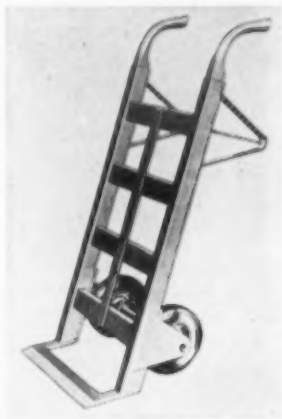
Send for circular describing various models of power and hand feed millers and attachments.

The BURKE MACHINE TOOL CO.

A Division of the U. S. Burke-Machine Tool Co.
Brotherton Road 2 Cincinnati 27, Ohio

For more details circle **NED-1361** on enclosed inquiry slip

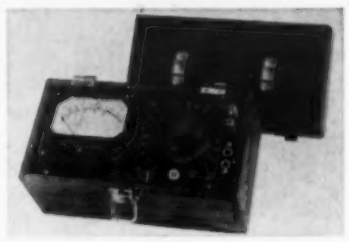
TWO-WHEEL HAND TRUCK
projecting bolts are concealed



Such features as completely enclosed steel box side shafts, unbreakable formed steel wheel brackets and heavy duty axle assembly with enclosed end bolts are incorporated in line of Dok-Master warehouse two-wheel trucks. Smooth-line design is overall keynote, with rivets, bolts and other outward projections concealed or eliminated. All exposed surfaces have also been smoothed to prevent tearing and snagging of bags, sacks and cartons. Six different models, ranging in capacities from 1000 to 2000 lb, are in production . Made by **Dico Co.**, 402 S. W. Sixteenth St., Des Moines 5, Iowa.

For more details circle **NED-1362** on enclosed inquiry slip

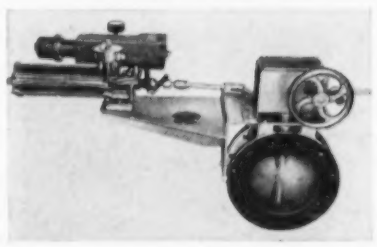
VOLUME LEVEL INDICATOR
sensitive to low power levels



Components of self-contained series 911 volume level indicator are mounted to withstand shock and rough usage given portable instruments. Sensitive to low power levels, it has indicating meter of copper-oxide type with characteristics suitable for monitoring purposes. Overswing does not exceed 1 to 1½ per cent. Two meter controls are provided: small decade with screwdriver adjustment for zero level setting of meter pointer and constant impedance T-type network for extending instrument range in steps of 2 Db. Made by **Daven Co.**, Dept. NED, 191 Central Ave., Newark 4, N. J.

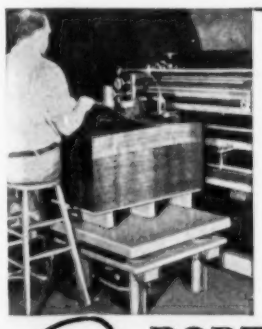
For more details circle **NED-1363** on enclosed inquiry slip

BUTTERFLY VALVES
for high pressure are rubber lined



Available in pipe sizes from 4 to 36 in. and larger, line of rubber-lined butterfly valves shuts off tight at high pressures. Rubber liner insures tight closure, particularly at higher temperatures. Valve, body and blade usually are made of cast iron or steel with steel blade, but where corrosive conditions are present, blade can be rubber covered or stainless steel. Valve shown is 10-in. heavy duty type for operation at 90 psi pressure differential across valve. Rubber liner is replaceable. It is equipped with air cylinder controller and remote manual control for automatic operation, plus clutch and hand wheel control at valve for use in case of automatic controller failure. Made by **W. S. Rockwell Co.**, 216 Eliot St., Fairfield, Conn.

For more details circle **NED-1364** on enclosed inquiry slip



Power positioning of material increases production in sheet feeding operation.

perhaps
YOUR PRODUCTION CAN BE INCREASED THROUGH POWER POSITIONING OF TOOLS AND MATERIALS

PORTELVATOR®
has supplied the answer to others.

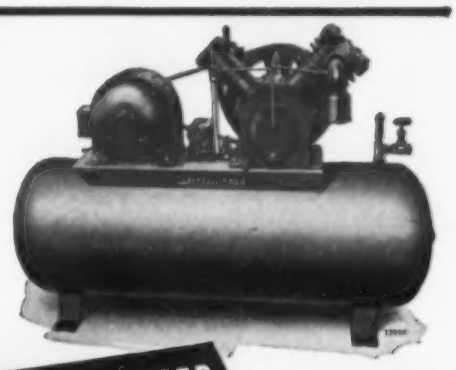
Start a beneficent chain reaction now; write for
BULLETIN P-507

Twenty-five ton capacity, self loading, self discharging die transfer table.

THE *Hamilton* TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

For more details circle **NED-1365** on enclosed inquiry slip

TYPE 30 AIR COMPRESSORS



ALL THE AIR YOU NEED all the time

You can count on day-after-day reliability with Ingersoll-Rand Type 30's on the job. Their rugged construction gives them strength and rigidity for heavy service—continuous or intermittent. Stainless steel valves, automatic overload protection, enclosed centrifugal unloader and other outstanding features assure a long, trouble-free life. Call our nearest branch or write us direct for full information.

A wide range of sizes—tank and baseplate mounted or bare units. ½ to 15 h.p., single and two-stage.

Ingersoll-Rand
514-3 11 Broadway, New York 4, N. Y.

For more details circle **NED-1366** on enclosed inquiry slip

Toledo SIMPACT—self-contained, adjustable threader, 1" to 2" pipe.

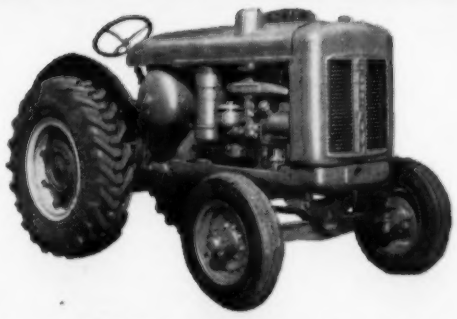
You'll do better with Toledo Pipe Tools and Power Pipe Machines on the job! *Better workmanship* . . . Toledo assures clean-cut threads for tight, leak-proof joints. *Faster production* in threading, cutting, reaming . . . ease of operation . . . accurate, efficient performance. *Lower costs* . . . Toledo dependability saves time and labor. Write for catalog. The Toledo Pipe Threading Machine Co., Toledo, Ohio.

RELY ON THE LEADER **TOLEDO**

PIPE TOOLS . . . POWER PIPE MACHINES . . . POWER DRIVES

For more details circle **NED-1367** on enclosed inquiry slip

Pneumatractor



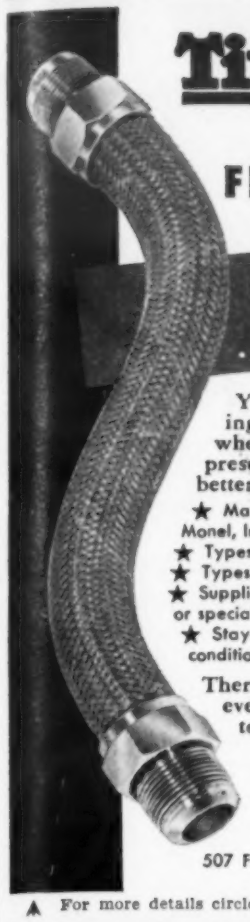
The Schramm Model 105 Pneumatractor is a self-propelled tractor-compressor combination that fills many requirements, and will . . .

- **PUSH . . . .** Anything a Wheel Tractor will Push
- **PULL . . . .** Anything a Wheel Tractor will Pull
- **POWER . . .** Anything a Wheel Tractor will Power
- **PROVIDE AIR . . .** For Every Compressed Air Job

Write for Bulletin NEU-51

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

For more details circle **NED-1368** on enclosed inquiry slip



Titeflex

ALL-METAL FLEXIBLE TUBING

...FOR VIBRATION
...FOR FLEXING
...FOR MISALIGNMENT

You can't beat Titeflex for conveying liquids, gases or semi-solids when there is any kind of motion present. Here are the facts about this better-built flexible tubing:

★ Made in five metals—brass, bronze, stainless, Monel, Inconel.
★ Types and sizes to withstand heat to 1550°F.
★ Types and sizes for pressures up to 6800 psi.
★ Supplied with any type of fittings—standard or special.
★ Stays flexible and stays tight under severe conditions.

There's a style of Titeflex for almost every need—and Titeflex is *all-metal,* to last longer in any kind of service.

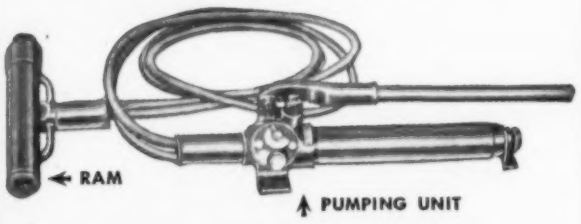
Write for complete catalog.

Titeflex, Inc.

507 Frelinghuysen Avenue, Newark 5, N. J.

For more details circle **NED-1369** on enclosed inquiry slip

Cut maintenance costs in YOUR plant . . . . .



with a HEIN-WERNER "PUSH and PULL" HYDRAULIC JACK

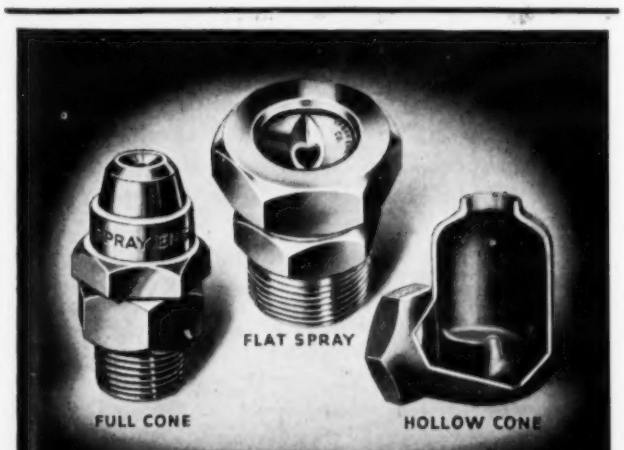
You can save manpower, time and money at hundreds of maintenance and production jobs with a H-W Push and Pull Hydraulic Jack. In models of 4, 10 or 20 tons capacity, these units offer direct push or pull power for moving, pressing, bending, straightening, lifting and lowering operations. Operated by remote control. Available with stand and press to give you a portable workshop. Get complete details from your H-W distributor, or write us.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORP.
Waukesha, Wisconsin

Also manufacturers of a complete line of hydraulic jacks in models from 1½ to 100 tons capacity.

For more details circle **NED-1370** on enclosed inquiry slip



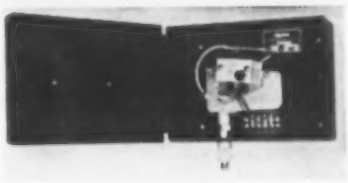
SPRACO NOZZLES

Write for NOZZLE CATALOG *to*

SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle **NED-1371** on enclosed inquiry slip

ELECTRICAL PRESSURE TRANSMITTER operates on Bourdon tube principle

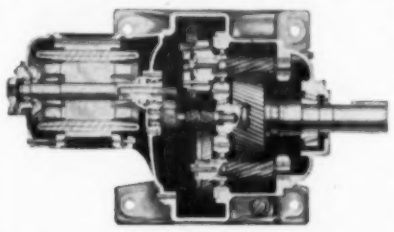


This Bourdon tube pressure transmitter will transmit pressure measurements electrically to remotely located indicators, recorders or controllers. Operating on differential transformer principle, device is offered in standard ranges from 0 to 10,000 psi. K Monel is used for Bourdon tube. Transmitters are equipped with zero adjustment, and bleed valves are available where required for liquid service. Armature requires only 0.01-gram force for its motion. Thus, primary element responds to slightest pressure variations. Made by **Automatic Temperature Control Co.,** 5206 Pulaski Ave., Philadelphia 44, Pa.

For more details circle **NED-1372** on enclosed inquiry slip

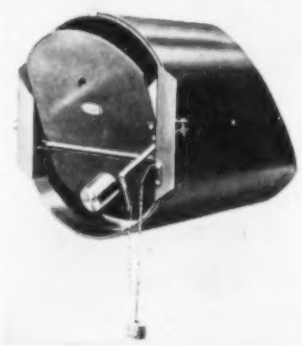
TRIPLE REDUCTION DRIVE capable of ratios up to 175:1

Through triple reduction gearing, type GM Syncrogear high torque, low-speed electric motor is capable of ratios up to 175:1. By use of two secondary pinions driving output gear, effective torque rating is doubled. Load is distributed equally between two pinions by splined herringbone pinion. Because of high-speed motor with torque-multiplying built-in gearing, amount of space necessary to house drive is small. Motor is available in 1 to 10 hp with output speed ranges of 5 to 25 rpm. Other features include normalized castings, asbestos-protected windings, solid Centricast rotor and Lubriflush lubrication. Made by **U. S. Electrical Motors, Inc.,** Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.



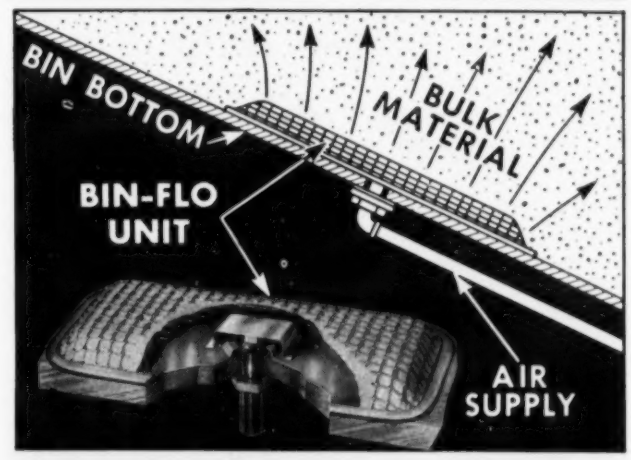
For more details circle **NED-1373** on enclosed inquiry slip

AUTOMATIC DRAFT REGULATOR usable on gas-fired boilers



Installed in new or old boiler installations, Field type M-G double-acting barometric craft control mounts on flue pipe or breeching. Close regulation of drafts of gas-fired boilers afforded by this unit permits operations at high efficiency. Sensitive gate swings inward to provide accurate updraft regulation and swings outward to relieve downdrafts immediately. Optional switch enables control to provide positive burner shut-off in case of dangerously prolonged downdraft or blocked flue conditions. Made by **H. D. Conkey Co.,** Field Control Div., Mendota, Ill.

For more details circle **NED-1374** on enclosed inquiry slip



BIN-FLO

USES SMALL VOLUME OF AIR AT LOW PRESSURE

KEEPS BULK MATERIALS MOVING

BIN-FLO units in bins, chutes, hoppers, etc., restore flow characteristics to dry, finely ground materials which tend to pack or bridge in storage. Types for all materials and conditions. No moving parts; simple installation; negligible operating cost; no maintenance cost.

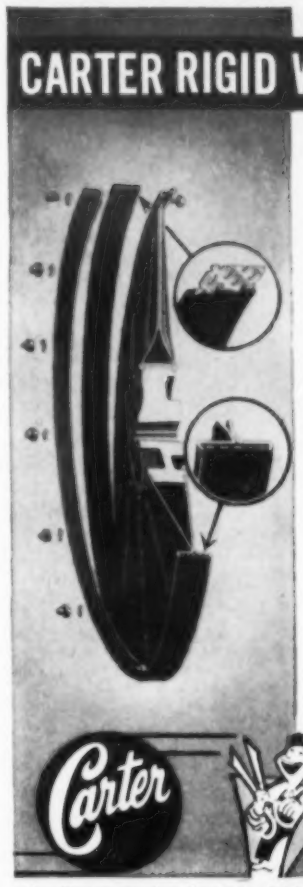
BIN-DICATOR bin level indicator—"The Eyes of the Bin"—automatically reports levels of materials in storage; automatically controls filling machines; prevents waste.

NEW 20-PAGE BOOK FREE

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

For more details circle **NED-1375** on enclosed inquiry slip

CARTER RIGID WHEELS & TIRES



Tops in High Speed Heavy-Duty Service for Bandsawing

Speed production, save saws, cut material loss and lower costs—with Carter Rigid Wheels and Quick Change Tires. Tires won't throw even at 1800 R.P.M. Mounted like automobile tires and rims. Changed in 10 min. Tires will outwear 3 or 4 of other makes. Available for 30 or 36-inch machines with any type of hub or bearing—either as standard equipment on new machines or for modernizing obsolete equipment.

Write for free, illustrated folder.

CARTER PRODUCTS COMPANY, INC.
421 Wm. Alden Smith Bldg.,
30 Ionia Ave., S. W.,
Grand Rapids 2, Michigan

For more details circle **NED-1376** on enclosed inquiry slip

where ELSE can you use PRINT-AD STRING the "TIE that TALKS"?

Tie up your products with Print-Ad String, and wherever they go they tell people your name or slogan, they give directions, they measure footage, they provide grade markings—they tell whatever you want told . . and tell it in a novel, colorful way.

Here's a tremendously strong COTTON tie—in thicknesses down to .003, widths down to ⅛", in any color or combination of colors you want—a tie that won't mar or dent the edges of articles tied in it—won't slip in the knot—won't stretch—and adds a smart touch to your package.

Mighty useful for manufacturing short-cuts, too. Be informed! Mail coupon now for FREE booklet full of valuable ideas!

BETTER TYING

Holds parts firmly for assembly, cutting, drilling . . Holds parts in finished assemblies . . Measures running footage . . Gives directions, grade marks, identifications.

BIG HELP IN THE PLANT

Good-looking all-cotton ties! . . Flat, won't mar or dent edges of boxes or merchandise . . Won't slip in the knot . . Non-stretch, great strength . . Also used as rip-cord opener, from candy bars to survival kits . . Ties anything!

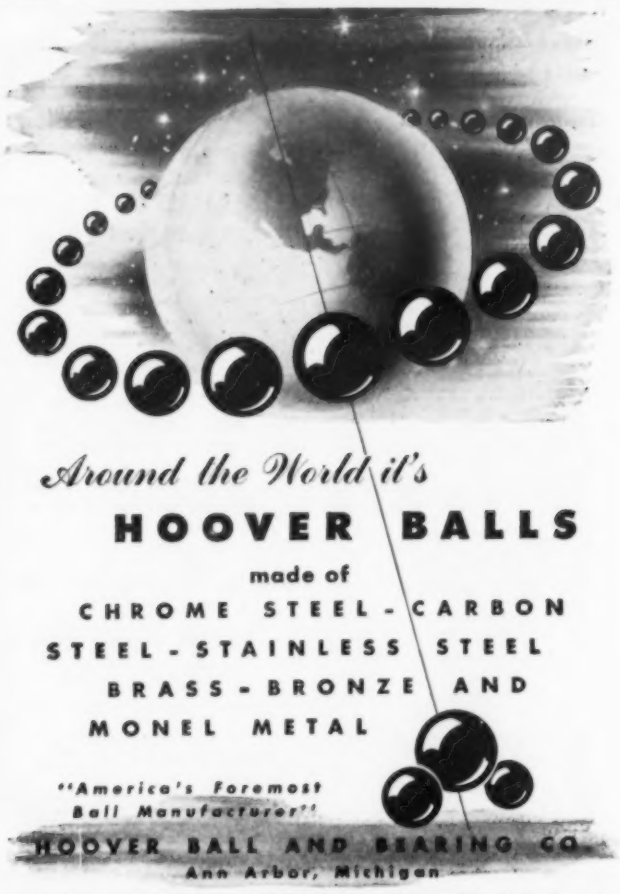
MAIL FOR FREE IDEA BOOK!

Dept. C - Chicago Printed String Co.
2300 Logan Blvd., Chicago 47, Ill.

GENTLEMEN: Without cost or obligation send me your **FREE** Idea Book.

My Name _____
Title _____
Company _____
Address _____
City _____ State _____

For more details circle **NED-1377** on enclosed inquiry slip



▲ For more details circle NED-1378 on enclosed inquiry slip ▲

TUF-STUF'S best proving ground is in the air!

It pays to specify TUF-STUF aluminum bronze alloys for parts that must stand up

Because they are both light and tough, TUF-STUF aluminum bronze alloys have proven invaluable in America's aircraft as valve-seat inserts, spark plug inserts, valve guides, gears and other vital parts.

If your product requires machined parts that are strong but light, resistant to corrosion, long wearing and resistant to oxidation even at high temperatures, then TUF-STUF is the right alloy for the job.

TUF-STUF alloys are furnished in the form of forgings, rods and screw machine parts. They fill Federal Specification QQ-B-666, Grade B, and several other variations. Because of the increased use and demand for both aluminum and copper, jobs carrying a Defense Order Number are receiving first consideration. 58

MUELLER BRASS CO., PORT HURON 26, MICH.

▲ For more details circle NED-1379 on enclosed inquiry slip ▲

20 Ways To Handle Special Loads

Free Bulletin on Attachments for E-P Fork Trucks

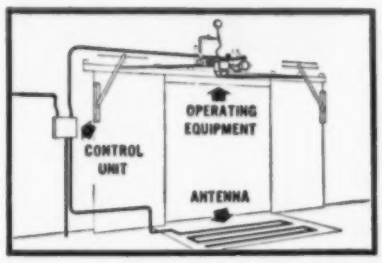
This profusely illustrated bulletin summarizes Elwell-Parker's 45 years' experience solving *unusual* materials handling problems. Often the peculiar shape or nature of a load requires a specially designed truck or attachment. Elwell-Parker has pioneered in this field. If your handling is "different", send for this bulletin *NOW*...Without obligation, you can also ask for expert advice from an EP man as to whether you need a standard Elwell-Parker or a specially "tailored" truck.

THE ELWELL-PARKER ELECTRIC COMPANY
4092 St. Clair Avenue • Cleveland 3, Ohio

▲ For more details circle NED-1380 on enclosed inquiry slip ▲

AUTOMATIC DOOR OPENER operated by floor-installed antenna

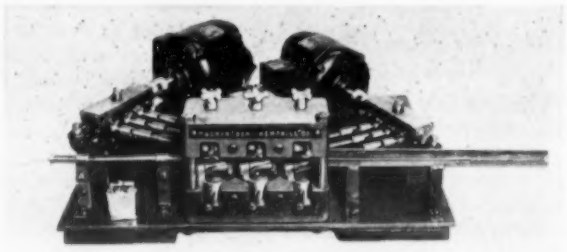
Electro-Field automatic door operator for industrial applications employs balanced high frequency electrical system with floor-installed antenna. Unbalancing of field by person passing over antenna actuates operating equipment and opens door which stays open to allow safe clearance, then closes automatically. Door speed is checked to avoid slamming. Opening and closing are by air pressure and timing is adjustable to individual requirements. Operator will control all types of sliding, swinging or folding doors. Unit is prepiped and prewired for easy installation. No stanchions or uprights obstruct doorways or approaches. Made by **National Pneumatic Co.**, Dept. N, 125 Amory St., Boston 19, Mass.



▲ For more details circle NED-1381 on enclosed inquiry slip ▲

ROTARY TUBE STRAIGHTENER power driven rolls handle up to ¼-in. tube or rod at speed of 100 fpm

Bends and kinks in cut lengths of 1/16-in. rod or tube up to ¼-in. OD thin wall tubing can be removed with model AYZ rotary straightener. Basic feature of this



smallest model in line of 12 machines is its arrangement of three sets of power driven identically contoured twin cross rolls. Middle pair is adjusted up or down for correct amount of offset. Rod or tube lengths revolve spirally through rolls which are all adjustable to bear along entire face on stock being straightened. Stock as short as 6 in. can be straightened.

Rolls are actuated by two 1/6-hp motors, and operating speed on rod or tube is 100 ft per minute. Straightener is equipped with antifriction bearings, and is 22 in. wide, 19 in. deep and 8 in. high. In 2 ft of ⅛-in. alloy bar stock it meets straightness specification to within 0.005-in. Finished pieces do not have cuts or spiral rub marks. Made by **Mackintosh-Hemphill Co.**, 903 Bingham St., Pittsburgh 3, Pa.

▲ For more details circle NED-1382 on enclosed inquiry slip ▲

DO YOU KNOW? Prizes totaling $1500 are being offered for papers by men in industry and research work on design, application and research in resistance welding. This contest closes July 1, 1952. Complete details regarding subject matter and contest rules are available from the Resistance Welder Manufacturers Association, 1900 Arch St., Philadelphia 3, Pa.

▲ For more details circle NED-1383 on enclosed inquiry slip ▲

ANNOUNCING Atlas CLAUSING
12" LATHES—4800 SERIES

HEAVY DUTY PRECISION V-BED

★ ½" Collet Capacity, 25/32" Bore
★ 12¾" Swing Over Bed, 7½" Over Saddle. 24", 36" or 48" between centers.
★ Timken Bearings

This is one of America's finest lathes for precision work in your tool room or on the production line. It provides construction and performance features never before combined in a 12" lathe of moderate price. Ask for catalog.

ATLAS PRESS COMPANY
223 N. PITCHER STREET
KALAMAZOO, MICHIGAN

Atlas DEPENDABLE QUALITY TOOLS SINCE 1911

▲ For more details circle NED-1384 on enclosed inquiry slip ▲

nyb

Investigate STEELFIN!

It has everything you want in Heavy Duty Heat Surface

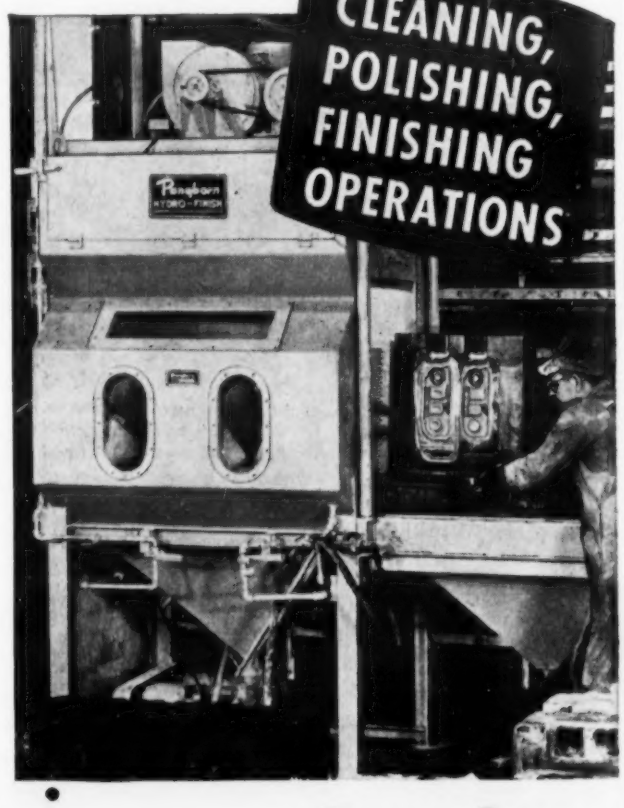
Built to meet modern industrial requirements for continuous heat service up to 150 pounds steam pressure. The rugged arc welded construction outperforms and outlasts heating elements made of thinner non-ferrous metals, avoids their expansion-contraction faults, yet has the same BTU efficiency. Originated in 1922, it has an enviable record of dependable performance.

WRITE FOR YOUR COPY OF BULLETIN 514, ALSO 492 WHICH GIVES ENGINEERING DETAILS

nyb THE NEW YORK BLOWER COMPANY
SALES OFFICES • 32nd STREET and SHIELDS AVENUE • CHICAGO 16
FACTORY, LAPORTE, INDIANA

▲ For more details circle NED-1385 on enclosed inquiry slip ▲

SPEED UP CLEANING, POLISHING, FINISHING OPERATIONS



Pangborn Hydro-Finish is versatile! Use it to speed up cleaning, polishing and finishing of molds and dies as well as production line work.

Hydro-Finish saves you time, labor and money. Scale and discoloration are removed in *minutes* instead of hours. Cleaned surfaces are virtually free of directional grinding lines. Costly hand work is greatly reduced. No danger of excessive metal removal because tolerances are held to .0001". Fine mesh abrasives suspended in water do a precision job.

Find out how Pangborn Hydro-Finish improves product quality, increases tool and die life! For full details, write today for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment.

Pangborn
BLAST CLEANS CHEAPER with the right equipment for every job

▲ For more details circle NED-1386 on enclosed inquiry slip ▲

MYSTIK

Self-Stik

DRI-PIPE INSULATION

HOLDS COLD AND HEAT

PREVENTS CONDENSATION

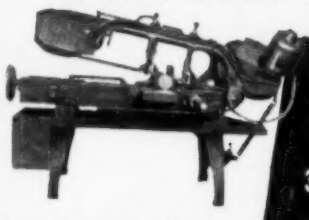
Goes on fast, saves time, cuts costs. Ideal for low-temperature applications—cold water lines, cold air ducts, refrigeration lines. Also used extensively for warm water lines, warm air ducts and for sound deadening.

WRITE NOW for free sample of MYSTIK Self-Stik DRI-PIPE Insulation to Mystik Adhesive Products, 2657 North Kildare, Chicago 39, Illinois

For more details circle **NED-1387** on enclosed inquiry slip

5 BIG REASONS

Why Wells Band Saws slash metal cut-off costs



Above is the Wells No. 8, shown with wet cutting system. It offers a capacity of 8" x 18", rectangular, 8" dia., rounds.

1. Fast, Accurate Action
2. High Job Productivity
3. Low Operating Cost
4. Real Blade Efficiency
5. Long, Dependable Service

YOU are always ahead when you handle your cut-off jobs on "Wellsaws." The Wells Band Sawing method will not only reduce your operating costs, but also give you greater job efficiency — better cuts, and real dependable service. There is a size and type for every need and every budget. Capacities range from 3½" x 6" to 48" x 48". Write for descriptive literature.

Wells Saws

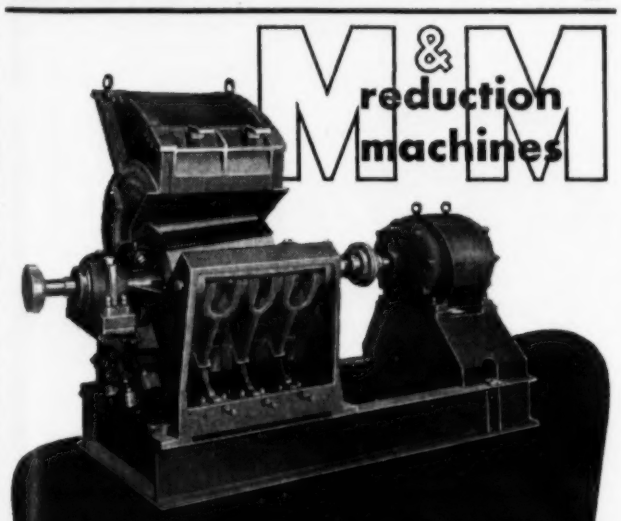
Products by Wells are Practical

Wells METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle **NED-1388** on enclosed inquiry slip

M & M reduction machines



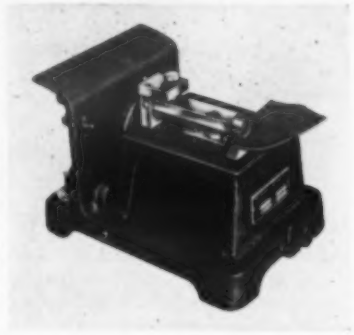
M & M Reduction Machines are rapidly gaining favor in industry for converting waste to uniform size for easy handling and in many cases into valuable by-products. Cut your disposal costs with an M & M Reduction Machine. Send us your problems.

MITTS & MERRILL

1000 South Water • SAGINAW, MICHIGAN

For more details circle **NED-1389** on enclosed inquiry slip

MOCCASIN PLUG CEMENTER can turn irregular shaped plugs

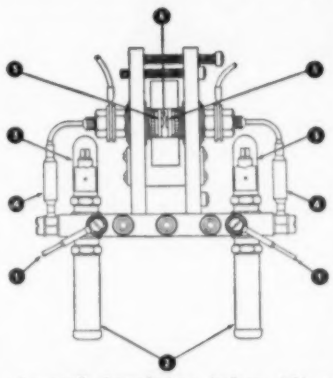


Compact latex cementer is designed to apply up to ½-in. margin of latex to moccasin plugs. Special feature is 2-in. dice bottom roller with knurled surface and smooth 1-in. dice top roller which permit turning of irregular shaped plugs. Cementer is equipped with simple adjustment for thickness control of cement. All working parts are stainless steel, and unit is easily dismantled for cleaning. Special self-contained geared-head motor drives rollers at fast production speeds. Exterior finish is green crackle. Made by **Potdevin Machine Co.**, 1285-A 38th St., Brooklyn 18, N. Y.

For more details circle **NED-1390** on enclosed inquiry slip

FIRE DETECTION ALARM system operates on temperature rate-of-rise and is foolproof

Approved by Underwriters' Laboratories and meeting state requirements for alarm systems, this fire detection-alarm system for industrial or public buildings functions on temperature rate-of-rise principle. Increasing temperature in protected area causes expansion of air in tubing circuit (1), both ends of which terminate at compensators of determined capacity (2). From these, expanded air travels up through breathers (3) which permit release of all but abnormal rises in pressure caused by fire. Pressure then travels through insulator tubes (4) which lead to opposing diaphragms (5) with platinum-faced contact points (6). Pressure forces diaphragms together, closing electrical alarm circuit.



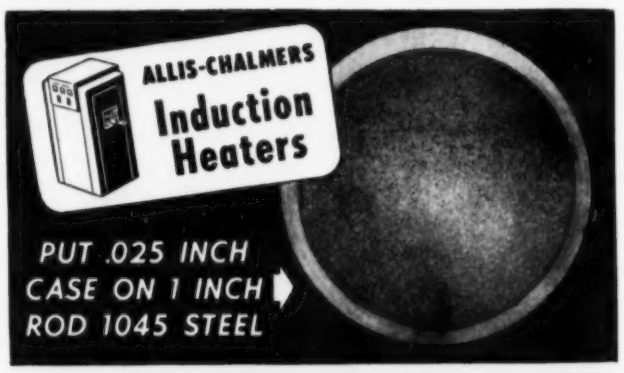
Design precludes possibility of false alarms from normal temperature changes and short, sudden surges of heat. Self-charging wet battery electrical supply automatically cuts in if outside power fails and warning signal sounds. Batteries deliver up to 60 hours emergency power. Detection can be zoned to show exact location of fire. Made by **Walter Kidde & Co.**, Dept. A, 675 Main St., Belleville 9, N. J.

For more details circle **NED-1391** on enclosed inquiry slip

DO YOU KNOW? More than 1500 applications for industrial tape are cited in 70-page "Standard Industrial Classification Manual" which also lists tape number and width. Though not available for general distribution, anyone interested can see a copy at the nearest Polyken wholesaler or write to Kendall Co., Bauer & Black Div., Polyken Industrial Tape Dept., 222 W. Adams St., Chicago 6, Ill.

For more details circle **NED-1392** on enclosed inquiry slip

ALLIS-CHALMERS Induction Heaters



Cost: 37/100¢ per inch

THIS IS TYPICAL of what Allis-Chalmers Induction Heaters can do to speed up production. On job after job, these units do hardening, annealing, soldering, brazing, and heating cheaper, faster, better.

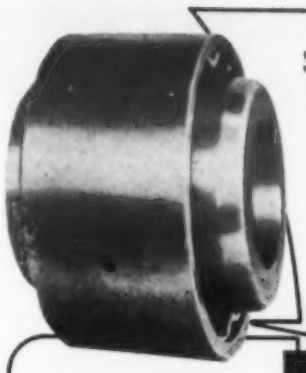
Cheaper — because so many more parts can be processed in an hour. **Faster** — because induction heating takes only seconds. **Better** — because uniform from part to part.

In addition, the Allis-Chalmers Induction Heater is versatile. By simply changing the work coil, the same heater can braze, solder, anneal, case, and through-harden.

Find out what Allis-Chalmers Induction Heaters can do to lower costs in your plant. Call your nearby A-C District Office, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3330

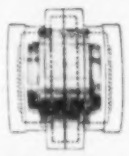
ALLIS-CHALMERS

For more details circle **NED-1393** on enclosed inquiry slip



SAVE SPACE, WEIGHT
REDUCE ASSEMBLY TIME
SLASH DOWN-TIME
CUT MACHINE WEAR
STRONGER, SAFER
LONGER LIFE

3/5 USUAL SIZE!
1/2 USUAL WEIGHT!



Sier-Bath Gear Coupling compared with two major conventional types of same shaft size, HP rating.

ONLY 7 PARTS— Assembled, Uncoupled in seconds!

Sier-Bath Flexible GEAR COUPLINGS

The only really modern gear couplings! Make possible more compact designs . . . cut assembly costs, down-time. Put less strain on shafts, bearings. Safer, trouble-free—no heavy flanges, no bolts to freeze, seize, strip or corrode.

WRITE FOR BULLETIN! Gives installation photos, specs for standard, vertical, mill motor, floating shaft types — sizes 7/8 to 8, HP 4 to 550. (Special sizes and types on request.) Distributors in principal cities.

9240 HUDSON BOULEVARD
NORTH BERGEN, N. J.

Sier-Bath GEAR and PUMP CO., Inc.

Also Manufacturers of Precision Gears and Screw and Gearex Rotary Pumps

For more details circle **NED-1394** on enclosed inquiry slip

When thinking of electrical protection keep in mind that (with rare exceptions on Commercial and Industrial Installations) . . .

Ordinary Fuses and Breakers DO NOT PROTECT EXCEPT AGAINST SHORT CIRCUITS

But FUSETRON FUSES

FUSETRON dual-element FUSES—

1 Protect against short-circuits.*
2 Protect against needless blows caused by harmless overloads.
3 Protect against needless blows caused by excessive heating — lesser resistance results in much cooler operation.
4 Provide thermal protection — for panels and switches against damage from heating due to poor contact.
5 Protect motors against burnout from overloading.
6 Protect motors against burnout due to single phasing.
7 Give DOUBLE burnout protection to large motors — without extra cost.
8 Make protection of small motors simple and inexpensive.
9 Protect against waste of space and money—permit use of proper size switches and panels.
10 Protect coils, transformers and solenoids against burnout.

*Fusetron Fuses have high interrupting capacity as shown by tests of the Electrical Testing Laboratories of New York City.

DON'T RISK LOSSES!

One **needless** shutdown, one **lost** motor, one **destroyed** panel or switch, one **burned out** solenoid . . . may be more costly to you than replacing every ordinary fuse with a Fusetron dual-element fuse.

Mail the Coupon Now!

Bussmann Mfg. Co., University at Jefferson, St. Louis 7, Mo. (Division of McGraw Electric Co.)
Please send me complete facts about FUSETRON dual-element Fuses.

Name _____ Title _____
Company _____
Address _____
City & Zone _____ State _____ 152

For more details circle **NED-1395** on enclosed inquiry slip

HELD . . . at pumping temperature

Regulating temperature of fuel oil from suction heater in bulk storage tank.

• Oil, wax, asphalt and similar products stored in large tanks are held accurately at pumping temperature with simple SARCO SELF-OPERATED TEMPERATURE REGULATORS applied to suction heaters or steam coils.

No compressed air required.

Sizes ½" to 8"; temperatures to 300°F.

Ask for Bulletin 603

520

SARCO COMPANY, INC.
EMPIRE STATE BUILDING, NEW YORK 1, N. Y.
Represented in Principal Cities
SARCO CANADA LTD., TORONTO 5, ONTARIO

▲ For more details circle NED-1397 on enclosed inquiry slip ▲

B.F.Goodrich

Wheelbarrows for light hauls

Moving heavy material for shipment

Simplifying storage problems

TIRE AND WHEEL ANALYSIS CAN SAVE YOU MONEY ON EVERY ONE OF THESE OPERATIONS

FOR more efficient materials handling, B. F. Goodrich offers a tire and wheel analysis plan designed to help beat rising costs and increase output. Trained BFG representatives study operations, make impartial recommendations regarding tire and wheel types and sizes, and give helpful care and maintenance tips . . . without obligation. Use the coupon for complete information.

A similar plan is available for manufacturers of industrial hauling equipment.

The B. F. Goodrich Co.
Department TW-158
Akron, Ohio

Please give me additional information on your new Tire and Wheel Analysis plan.

Name_____
Title_____
Company_____
City_____ State_____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

only B. F. Goodrich has a complete line of industrial tires.

▲ For more details circle NED-1398 on enclosed inquiry slip ▲

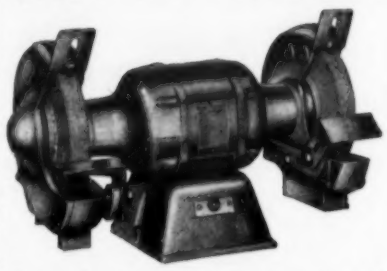
GRANITE SURFACE PLATES are accurate to 0.000005-in.

Black granite surface plates ranging in sizes from 9 x 12 in. to 48 x 120 in. are produced with surface accuracy within five millionths of an inch, using an autocollimator. This light beam and mirror technique for checking accuracy enables artisan to produce perfectly flat surface for precision set-up and checking work. Made by **Collins Microflat Co.**, 2326 E. Eighth St., Los Angeles 21, Calif.

▲ For more details circle NED-1399 on enclosed inquiry slip ▲

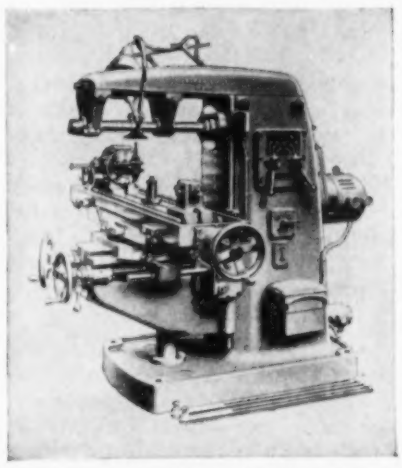
BENCH GRINDERS made in wide clearance type

Wide clearance between wheels and motor frame is feature of line of grinders available in 6, 7 and 8-in. sizes. Motor frame is considerably smaller in diameter than grinding wheel, making it possible to press long objects against both wheels without touching motor frame. Also incorporated are lifetime-lubricated ball bearings, single-phase ½-hp capacitor type motor that will not burn out with repeated overloads, cast iron guards and horizontally and vertically adjustable tool rests that can be tilted for angle grinding. Accessories available include pedestal, water pot, tool tray, illuminating and nonilluminating eyeshields and high voltage switch. Made by **Baldor Electric Co.**, 4353 Duncan Ave., St. Louis 10, Mo.



▲ For more details circle NED-1400 on enclosed inquiry slip ▲

MILLING MACHINES in vertical and horizontal models

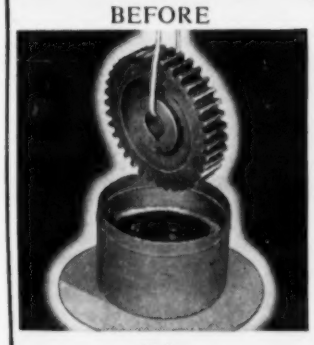


Both No. 2 and No. 3 Belgian-made Jasper milling machines are offered in range of vertical and horizontal models. In most instances, universal type has been designed to incorporate climb-milling attachments. Heavy duty construction adapts machines for production manufacturing and use of tungsten carbide cutters. Main drive motor powers the spindle, and separate motor actuates feeds of table. Distributed by **Morey Machinery Co.**, Dept. NED, 410 Broome St., New York 13, N. Y.

▲ For more details circle NED-1401 on enclosed inquiry slip ▲

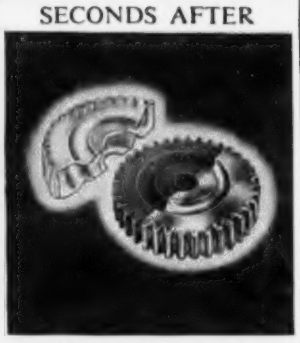
HOT MELT PLASTIC COATINGS for GEARS • TOOLS • PRECISION PARTS

BEFORE



Dip

SECONDS AFTER



Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
476 Frelinghuysen Avenue, Newark 5, N. J.

▲ For more details circle NED-1402 on enclosed inquiry slip ▲

standardize with standard
HALLOWELL FOREMAN'S DESKS®

HALLOWELL FEATURES

• Sturdy steel construction • Trim, attractive appearance • Smooth, splinter-proof writing surface • Easy gliding, ball bearing roller drawers • No protruding handles to catch or tear clothing

Standardized steel desks, with standard unit accessories, pay dividends in convenience and flexibility. As your requirements change, you simply add extra drawers, shelves, pigeonholes, etc. Write for descriptive literature.
STANDARD PRESSED STEEL CO.,
Jenkintown 24, Pennsylvania.

HALLOWELL SHOP EQUIPMENT DIVISION
JENKINTOWN, PENNSYLVANIA

SPS

▲ For more details circle NED-1403 on enclosed inquiry slip ▲

Bulletin 712-13 A-C Combination Starting Switches

A-B Quality

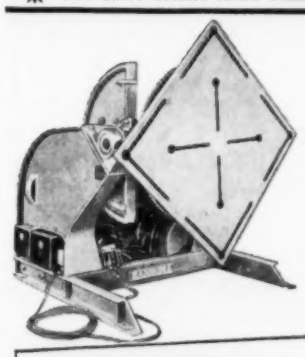
• Available with fuses or circuit breaker

Allen-Bradley combination starters are popular with machinery manufacturers because (1) they save space, (2) they're easy to install, (3) they provide added safety features, and (4) they're more attractive in appearance than separate disconnect switch and motor starter. Available in seven types of enclosures.

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY QUALITY MOTOR CONTROL

▲ For more details circle NED-1404 on enclosed inquiry slip ▲



Welding lots of Different pieces or lots alike . . .

This Positioner Increases Production . . . Improves Welds Cuts Rod Waste

This universal table top makes the Worthington Welding Positioner as profitable on *job* work as in mass production.

Those "T" slots make the table adaptable to any shape of work piece and a wide range of sizes. No special jigs or fixtures needed.

Result—up to 50% more footage, better welds (using higher current and heavier rods), less welding rod waste.

Welding positioner capacities from 100 lbs to 30 tons. Also: turning rolls from 3 to 150 tons, stationary or self-propelled.

Write Worthington Pump and Machinery Corporation, Dunellen, New Jersey, for bulletins or additional information.

Y 1.5

WORTHINGTON
WELDING POSITIONERS

▲ For more details circle NED-1405 on enclosed inquiry slip ▲

Have YOU sent in? EVERYONE else has

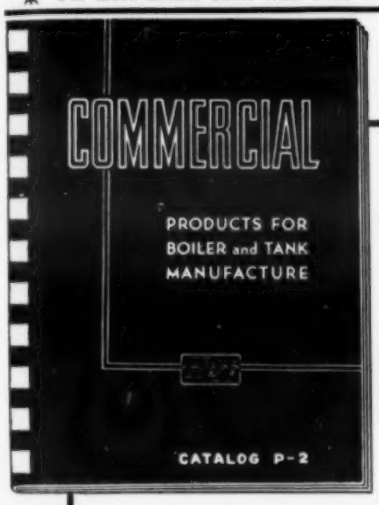
Frankly, we've been amazed at the interest in our new book on TENSION LINKAGE. We've been literally swamped with inquiries . . . have exhausted two printings . . . have a third on the press. If you haven't already requested your copy, we suggest you do so today.

You'll find it of real value if you design lift trucks, hoists, counterweight suspensions, controls or any type of equipment that must transmit pull or lift. *Send for your free copy today.* Chain Belt Company, 364 Plainfield St., Springfield 2, Mass.

BALDWIN-REX ROLLER CHAINS

A PRODUCT OF Chain Belt COMPANY OF MILWAUKEE

▲ For more details circle NED-1406 on enclosed inquiry slip ▲



TANK HEAD Catalog by "COMMERCIAL" Ready for You NOW!

WRITE FOR IT

THE COMMERCIAL SHEARING AND STAMPING CO.

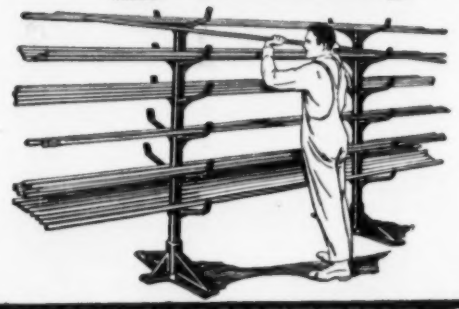
P. O. BOX 719 · YOUNGSTOWN 1, OHIO

▲ For more details circle NED-1407 on enclosed inquiry slip ▲

SPEEDS UP STOCK-ROOM SERVICE

The BROWN TIME-SAVING RACK saves the time previously lost end-hauling each bar or stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time, and returned to their production machines to turn out a maximum of output. Any time you require additional storage space, all you need do is to add more units. If you want to relocate it at any time, you can do so for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn, warp, sag or twist: depreciation is practically nil. SEND FOR BULLETIN No. 26-D DESCRIBING—

BROWN'S *QUICK-SERVE* RACKS



BROWN ENGINEERING CO.

129 N. THIRD ST. READING, PENNA.

RACKS • VISES • CLUTCHES • COUPLINGS

▲ For more details circle NED-1408 on enclosed inquiry slip ▲

ANGLE-HEAD FLASHLIGHT attaches by clip to belt or clothing

Hands are left free for performance of various functions by clip incorporated in design of angle-head flashlight for attaching it to belt or clothing. Flashlight has translucent red lens ring which shines warning circle of light from all sides when lamp is on. Other features include three-position safety lock switch, spare lamp carrier in deep cap, barrel-length ribbing for firm hand grip and case of high impact polystyrene. Made by **Olin Industries, Inc.,** Electrical Div., Dept. NED, New Haven 4, Conn.

▲ For more details circle NED-1409 on enclosed inquiry slip ▲

INSTRUMENT RECTIFIERS use selenium rectifier cells

Utilization of selenium rectifier cells in Minisel instrument rectifiers is made possible by special plate stabilizing process and by matching characteristics of individual cells for uniformity within and between units. Efficient transformers have higher blocking resistances and lower conducting resistances than conventional units. They are made in following configurations: half-wave, center tap, doubler, ¾-bridge and bridge. Individual cells are rated at 10 v ac input and 5 ma dc output, but are available in input ratings up to 26 v ac and output ratings up to 10 ma dc. Made by **Electronic Devices, Inc.,** Precision Rectifier Div., Dept. NED, 429 Twelfth St., Brooklyn 15, N. Y.

▲ For more details circle NED-1410 on enclosed inquiry slip ▲

PHOTOGRAPHIC FLASH UNIT photo tube is stroboscope type

Basic Monostrob II photographic flash unit has self-contained reflector and FT110 flash tube and is plugged into ordinary light socket. It can be used with any X-type shutter or with built-in phototube triggering system to fire unit in synchronism with any type of electronic flash. Accessories available include small Shorty Snoot for protraiture, Holophane diffuser refractor for providing evenly distributed light, stands, 14-in. studio reflector and light control lunes. Telltale on back of case lights up immediately after unit is fired and dies out slowly as unit recharges. Six seconds are required between flashes. RCA 5823 trigger tube and Sprague electrolytic capacitors are incorporated. Made by **Strobo Research,** Dept. BDH, 4351 N. 35th St., Milwaukee 16, Wis.

▲ For more details circle NED-1411 on enclosed inquiry slip ▲

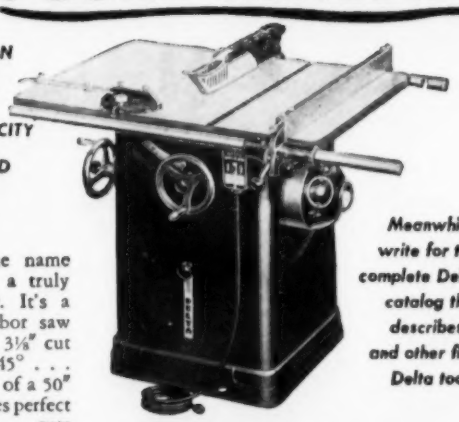
YOU CAN DO so many different jobs — so much better — so much *faster* with a DELTA UNISAW

★ *RUGGED CONSTRUCTION FOR STEADY PRODUCTION*

★ *BIG CAPACITY*

★ *HIGH SPEED*

★ *EXTREME ACCURACY*



Meanwhile, write for the complete Delta catalog that describes it and other fine Delta tools.

Just what the name implies . . . a truly universal saw. It's a 10" tilting arbor saw that makes a 3⅛" cut . . . tilts to 45° . . . cuts to center of a 50" panel . . . makes perfect mouldings . . . cuts dadoes and tenons accurately . . . at high speed and low cost.

The initial investment for this time-saving, money-making Unisaw is less than you would think. Ask your Delta dealer about the Unisaw today.

There's a Delta Power Tool for Your Job - Wood or Metal Working

53 MACHINES — 246 MODELS — MORE THAN 1300 ACCESSORIES

DELTA MILWAUKEE

DELTA POWER TOOL DIVISION Rockwell MANUFACTURING COMPANY 617BE. VIENNA AVENUE, MILWAUKEE 1, WISCONSIN

▲ For more details circle NED-1412 on enclosed inquiry slip ▲

PUTS OUT FIRES FASTER with ORDINARY WATER

ROCKWOOD TRIPLE-ACTION SG-48 WaterFOG NOZZLE

Rockwood triple-action SG-48 WaterFOG Nozzle a truly all-purpose nozzle that extinguishes and controls fires in flammable liquids and ordinary combustibles with plain water. Protects operator from fumes and heat. Discharges *high velocity*. WaterFOG, straight stream and *low velocity* WaterFOG. Available for service on fire hose lines in ¾" — 1" — 1½" and 2½" sizes. Approved by Underwriters' Laboratories, Inc., and Factory Mutual Laboratories.

Write for complete information and prices on Rockwood's growing family of portable fire fighting products.

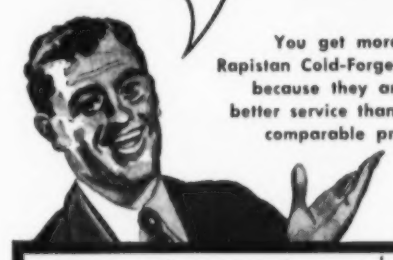
ROCKWOOD SPRINKLER COMPANY

44 HARLOW STREET WORCESTER 5, MASS.

Portable Fire Protection Division . . .

▲ For more details circle NED-1413 on enclosed inquiry slip ▲

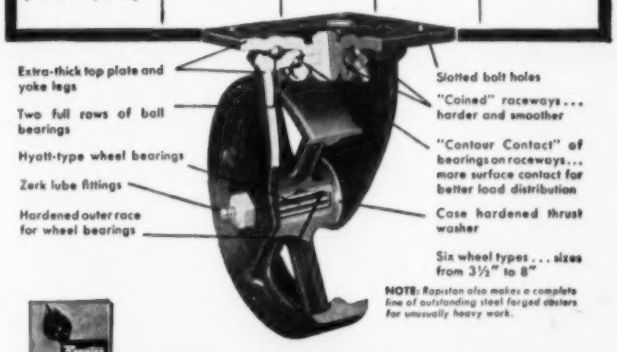
BETTER because they are BUILT to be better



You get more for your money with Rapistan Cold-Forged Industrial Casters because they are built to give longer, better service than any other caster of comparable price today.

HERE'S PROOF!

MAKE THESE COMPARISONS YOURSELF	RAPISTAN Cold-Forged Series 40	CASTER A	CASTER B	CASTER C
	Letters represent leading makes of stamped steel casters.			
Method of construction	Cold-Forged	Stamped	Stamped	Stamped
Thickness of top plate	1/4"	3/16"	3/16"	3/16"
Thickness of caster legs	3/16"	1/8"	1/8"	1/8"
Number of raceways—rows of ball bearings	2	2	2	2
Smoothness of raceways	.0007"	.0023"	.0030"	.0016"
	Figures represent degrees of roughness measured to .0001"			
Ball-bearing surface contacting top plate raceway	.120"	.005"	.030"	.030"
Ball-bearing surface contacting yoke raceway	.100"	.070"	.030"	.005"
Protection between wheel-hub and yoke leg	Case hardened, thrust washer	None	None	None
Shape of bolt hole for use with previous spacings	Slotted for flexibility	Round	Round	Round



NOTE: Rapistan also makes a complete line of outstanding steel forged casters for unusually heavy work.

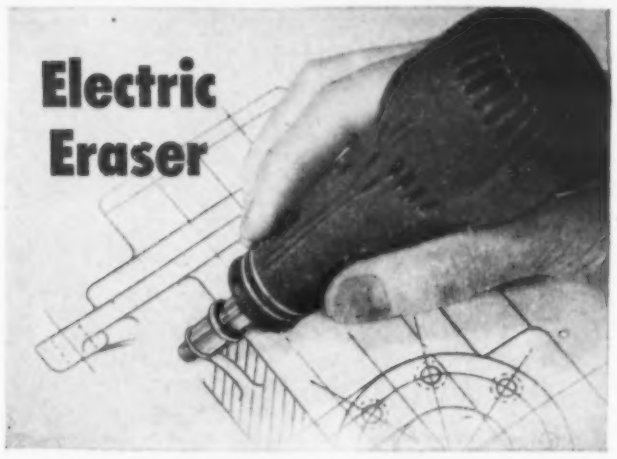
FOR YOU . . . Illustrated catalog with specifications on Cold-Forged casters and information on our complete line of casters and hand trucks. Write today.

Rapistan®

FASTEST GROWING NAME IN CASTERS

The RAPIDS-STANDARD CO., Inc., 754 Rapistan Bldg., Grand Rapids, Michigan

▲ For more details circle NED-1414 on enclosed inquiry slip ▲



saves time safely!

Only this Bruning machine saves drafting time and gives you a 7 in. eraser that can't fly out, causing ferrule to damage drawing.

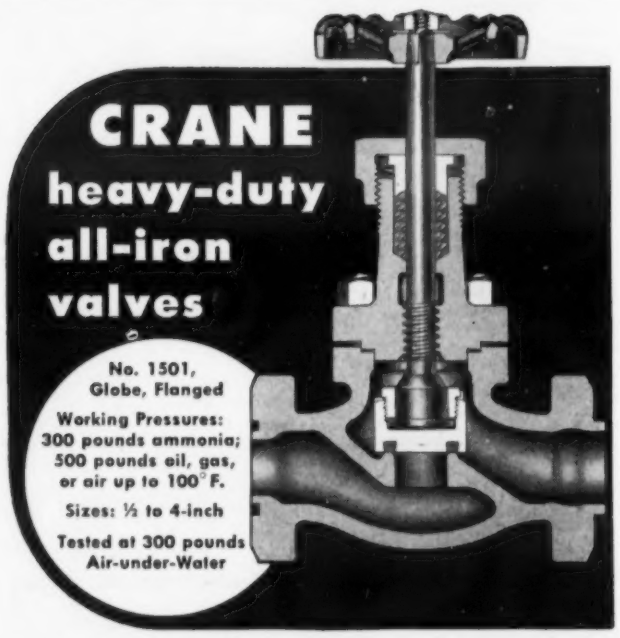
Stays cool under continuous operation. Rubber-mounted, permanently oiled bearings assure quiet, smooth operation. Lightweight, long-wearing—just one moving part.

Write for free folder. CHARLES BRUNING COMPANY, Inc., Dept. C22, Teterboro, New Jersey

BRUNING

Specialists in copying since 1897

▲ For more details circle **NED-1415** on enclosed inquiry slip ▲



FOR SAFER CONTROL OF HAZARDOUS FLUIDS

Recommended especially for ammonia service, Crane Ferrosteel valves also find wide application on air, gas, oil, and chemical lines requiring heavy duty valves. Special Crane seating design and rugged construction make these valves highly effective for safe and economical handling of deadly or hazardous fluids.

TIGHT SEATING—Two disc seat combinations available: (1) special lead-faced disc and integral body seat rings; (2) case-hardened steel disc and renewable steel seat rings.

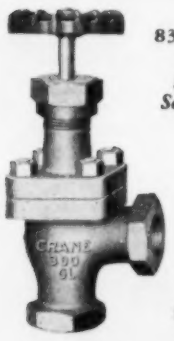
EXTRA-TIGHT STEM SEAL—Stuffing box is unusually deep. Machined "back seating" shoulder on stem permits repacking when valve is wide open.

RUGGED CONSTRUCTION—Heavy, massive body sections help resist distortion. Bolted bonnet provides liberal strength; male and female joint eliminates danger of gasket blow-out.

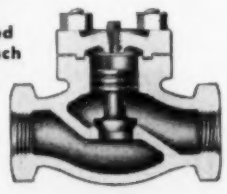
LEAKPROOF END CONNECTIONS—Flanged valves have tongue and groove faces. Screwed valves have long threads with recesses for sealing with solder.

COMPANION LINES of check valves, expansion valves, flanged or screwed fittings, flanges, unions, and return bends are available. Ask your Crane Man about the complete line, or WRITE FOR CIRCULAR 320.

CRANE CO.
836 South Michigan Avenue
Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas



No. 1507½, Check, Screwed
Sizes: ½ to 2-inch



No. 1505, Angle, Screwed
Sizes: ¼ to 3-inch

EQUIPMENT FOR EVERY PIPING SYSTEM

CRANE

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

▲ For more details circle **NED-1416** on enclosed inquiry slip ▲

PLASTIC FABRICATED TANKS, DUCTS used with highly corrosive agents

Tanks, hoods, vents, ducts and other miscellaneous industrial equipment for use where highly corrosive conditions prevail are available in Polydur, a rigid polyvinyl chloride plastic. Tanks are of two types—self-supporting, made from ¼ to 1-in. thick sheets; and liners for wood, metal or concrete tanks, made from ⅛-in. sheets. Material resists acetic, nitric and concentrated sulphuric acids; ammonium nitrate; alkalies; salts; oxidizing agents; oils; greases; alcohols; gasoline and carbon tetrachloride up to 170° F without dimensional deformation or without loss of chemical properties at higher temperatures. It can be formed and welded into almost any design at 250 to 300° F. Plastic will not deteriorate, is good dielectric, self-extinguishing and does not become brittle at subzero temperatures. Made by **Munray Products, Inc.**, 12401 Crossburn Ave., Cleveland 11, O.

▲ For more details circle **NED-1417** on enclosed inquiry slip ▲

LINE TYPE PURIFIER removes entrainment in compressed air, gas, vapor and steam lines

Applicable throughout chemical, petroleum, metalworking and processing industries, Hi-eF line type purifier is installed directly in compressed air, gas, vapor or steam lines. It provides for the efficient removal of entrainment such as solids, condensate, moisture, line scale and other impurities. Units are designed to remove 99 per cent of foreign matter and deliver clean dry vapor.

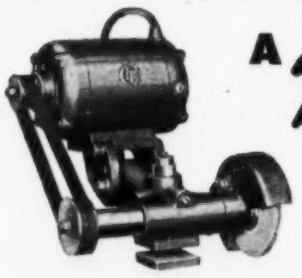
Centrifugal element within the unit gives entrainment-laden vapor a rapid rotational motion. This causes heavier entrainment to be thrown outward to the walls of the purifier where it is drained down and ejected. Unit operates at all velocities, has no moving parts and employs self-cleaning action. Pressure drop is held to minimum through design of this device which has large slug capacity and is offered in broad range of sizes.

Built and stamped to ASME Code for unfired pressure in high pressure models, purifiers have forged steel flanges with bodies of welded steel construction. Special designs are available. Standard models are offered in sizes from ½-in. through 24 in. Made by **V. D. Anderson Co.**, 1932 W. 96th St., Cleveland 2, O.

▲ For more details circle **NED-1418** on enclosed inquiry slip ▲

DO YOU KNOW? "Tooling for Security" is the theme selected for the 1952 Tool Show which will be held at the International Amphitheatre in Chicago during the week of March 17 to 21. Exposition, technical papers, forums, plant inspections and other functions will be sponsored by the American Society of Tool Engineers, ASTE Bldg., 10700 Puritan Ave., Detroit 21, Mich.

▲ For more details circle **NED-1419** on enclosed inquiry slip ▲



A "Must" FOR EVERY LATHE

Mount THE CINCINNATI Ball Bearing Tool Post Grinder on the compound rest of any lathe with a 9" swing, or larger, and you're ready for fast, convenient grinding of lathe centers, cutters, reamers, rolls and dies.

THE CINCINNATI will grind work within 2½" of the maximum lathe swing . . . it can be swivelled around the clamping bolt . . . spindle height is readily changed. Adjustable motor mount makes it easy to maintain proper belt tension. Send today for Bulletin 52-PD with detailed information.

Manufacturers of a complete line of ELECTRIC DRILLS, GRINDERS, BUFFERS, PORTABLE TOOLS, AIR MASTER DUST COLLECTORS.

TRADE *The Cincinnati* MARK

THE CINCINNATI ELECTRICAL TOOL CO.

Division of THE R. K. LeBLOND MACHINE TOOL CO.

CINCINNATI 8, OHIO, U. S. A.

▲ For more details circle **NED-1420** on enclosed inquiry slip ▲

NOW...simulate copper, brass, bronze with M&W PLATELUSTRE

Apply a coating of the new PLATELUSTRE finishes to zinc or steel—and you wind up with products closely resembling copper, brass or bronze. Whether you have been using copper and its alloys for *making* products or for *plating* them, these finishes will help solve your problem.

Air-drying and baking types. Ask for free literature—or have an M & W Technical Service Engineer demonstrate PLATELUSTRE right in your own plant.

PIONEERS IN PROTECTION — 76th YEAR

MAAS & WALDSTEIN CO. 436 RIVERSIDE AVE. NEWARK 4, N. J.

Midwest Div.: 1650 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.

MANUFACTURERS OF INDUSTRIAL FINISHES

▲ For more details circle **NED-1421** on enclosed inquiry slip ▲

Simple, Rugged, Low Cost Industrial Cooling

The FLOW COLD UNIT is shipped factory assembled and tested, ready for instant use.

FLOW COLD gives you the *simplest*, most *economical* installation you can make.

Used in hundreds of industrial applications where you save money through temperature control

For the answer to YOUR requirements, address Department FC.

ACME PRODUCTS

ACME INDUSTRIES, INC.
Flow Cold Division
JACKSON, MICHIGAN

CONTINUOUSLY SERVING THE AIR CONDITIONING AND REFRIGERATION INDUSTRY SINCE 1919.

▲ For more details circle **NED-1422** on enclosed inquiry slip ▲

. . . with new-type "National" PLACE BOLTS

They're more economical—self-locking—stronger!

MORE ECONOMICAL—Now, for the first time, new Slotted-Type Place Bolts can be made of carbon as well as alloy steels—making possible savings in costs on all applications wherever a locking bolt is needed.

SELF-LOCKING—Place Bolt's spring-action head, tightened against a rigid seat, locks the bolt against all involuntary loosening influences including vibration, and insures against impact or shock failure.

STRONGER—One-piece, all-metal, new Slotted-Type Place Bolts now have reinforced continuous-grained heads that increase their yield and fatigue strength.

THE NATIONAL SCREW & MFG. CO.
Cleveland 4, Ohio

National PRODUCTS

▲ For more details circle **NED-1423** on enclosed inquiry slip ▲

The Famous Sutton MOTOR DRIVEN PRESSURE BLOWER

ORDERED BY EVERY BIG NAME IN THE COUNTRY!

THREE SIZES ¼, ½, 1 H.P.

USED FOR EXHAUSTING DUST, SMOKE, FUMES, VAPOR . . COOLING AND DRYING . . CONVEYING COTTON, WOOL, SHAVINGS . . FORGE BLASTING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY to reduce weight and increase strength. CENTRIFUGAL TYPE. Delivers even, nonpulsating flow of air. Universal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

WRITE FOR LITERATURE AND PRICES

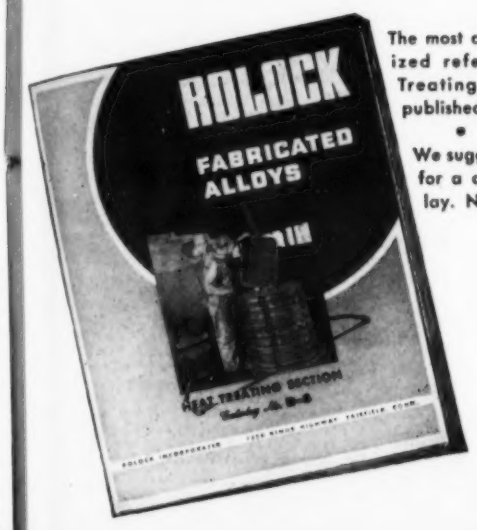
Sutton Manufacturing Corp.

126 WEST WILSON AVE. NORFOLK, VA.

▲ For more details circle NED-1424 on enclosed inquiry slip ▲

ROLOCK FABRICATED ALLOYS

HEAT AND CORROSION RESISTANT



The most complete, specialized reference on Heat Treating applications yet published.

• • •

We suggest that you send for a copy without delay. No obligation.

ROLOCK, INC.
1412 KINGS HIGHWAY, FAIRFIELD, CONN.

▲ For more details circle NED-1425 on enclosed inquiry slip ▲

HOUGHTON RUST PREVENTIVES meet these Government Specifications

U. S. SPECIFICATION NUMBER	APPROVED HOUGHTON PRODUCT
USA 2-82C	Cosmoline 2-82C
USA 2-121	Cosmoline 2-121
USA 2-84B, Am. 1	Cosmoline 2-84B, Am. 1
AN-C-124A, Am. 3, Type II	Cosmoline 333
AXS-1347	Cosmoline 333
AXS-1759, Grade II	Cosmoline 377
JAN-L-644 (Formerly USA 2-120)	Cosmoline 936
USA 2-122	Cosmoline 332
MIL-L-3150	Cosmoline 335
AXS-934, Grade I	Cosmoline 946
AXS-934, Grade II	Cosmoline 947
USA 3-182, Am. 2	Cosmoline 110-D
MIL-C-6708, Type I (Formerly AN-C-52-b, Type I)	Cosmoline 911
AXS-673, Rev. 2	Cosmoline 344
AN-VV-C-576B, Am. 2, Type I	Cosmoline 900-A
AN-VV-C-576B, Am. 2, Type II	Cosmoline 1123 Cosmoline 1103
JAN-P-115, Am. 2	Cosmoline 910
MIL-C-15167, Am. 1, Type A	Rust Veto N. B.
MIL-C-15167, Am. 1, Type C	Rust Veto N. S.
USA 50-11-37a, Am. 1	Cosmoline 503
52-C-18, Grade I	Cosmoline Brilco, Grade I

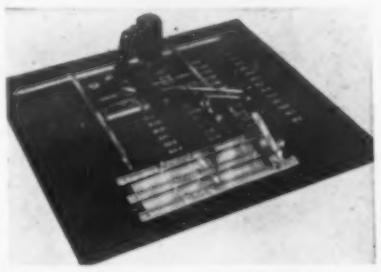
GET NEW GOVERNMENT SPECIFICATION BOOKLET
Write to E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

E. F. HOUGHTON & CO.
PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO

Ready to give you on-the-job service . . .

▲ For more details circle NED-1426 on enclosed inquiry slip ▲

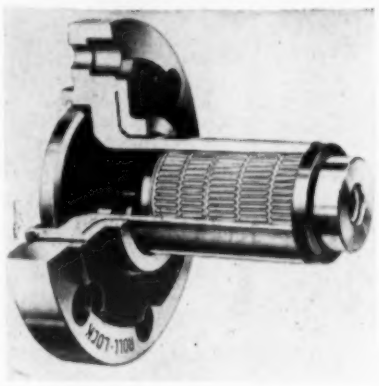
ENGRAVING MACHINE can be used on panels of any size



Featuring detachable chassis which, when removed from base, can be easily placed directly on work surface, Engravograph industrial engraving machine can be used on panels of any dimensions. Panels and other surfaces need not be brought to machine which is tracer guided and can be operated by unskilled labor. Fifteen different sizes of letters and numbers can be reproduced from one master alphabet. Machine will perform multiline engraving with only one setup. Adjustable copy holding slides allow for three or more lines of engraving on a single setup. Made by **New Hermes, Inc.**, Dept. 26, 13-19 University Place, New York 3, N. Y.

▲ For more details circle NED-1427 on enclosed inquiry slip ▲

CHUCKING TOOLS designed for internal or external chucking of parts and tools



Turning, grinding or inspection operations are facilitated with line of precision tools for internal and external chucking of parts. Roll-Lock mandrels, arbors and chucks use rolling friction locking principle for creating rigid and accurate centering or shrink fit which assures transmission of maximum given torque, thrust and accuracy. In either internal or external method of chucking, only rolling friction has to be overcome. With very little turning force on actuating ring or cone, tremendous holding pressures are developed.

Powerful wedging action of rollers expands or compresses the chucking surface to a shrink fit. Though grip is released quickly by reverse twist of actuating ring or cone, work cannot be loosened in chuck by reversing rotation of tool or by shock or vibration. Except for metal roller cage, parts are hardened and ground alloy steel. Seals prevent entrance of chips, dust and fluids into working parts of tool. Made by **Scully-Jones & Co.**, 1952 S. Rockwell St., Chicago 8, Ill.

▲ For more details circle NED-1428 on enclosed inquiry slip ▲

DO YOU KNOW? The first commercial shipment of the G-E packaged 'heat pump' which will provide year-round all electric air conditioning for home or office has been made. This unit operates on same principle as an electric refrigerator, except that the cycle is reversed to provide heat when heat is required instead of refrigeration. This automatic thermostatically-controlled device is offered in 3 and 5-hp ratings by General Electric Co., Air Conditioning Dept., Bloomfield, N. J.

▲ For more details circle NED-1429 on enclosed inquiry slip ▲

VEMCO DRAFTING MACHINES

Designed by Engineers for Engineers

1. Convenient thumb-action indexing for every 15°.
2. Simple and positive band tightening device.
3. Flexibly articulated arms for easy head movement and flat-lying scales.

THE engineers responsible for the design of VEMCO Drafting Machines are thoroughly familiar with drafting problems. VEMCO Machines incorporate ALL the facilities desired by the engineer to fill his exacting needs ★ The VEMCO offers smooth, effortless movement . . . positive setting and control for speed and accuracy. flexibility for convenient operation. . elimination of an awkward assortment of drafting tools . sturdy construction for durability. ★ VEMCO Drafting Machines are finished in blue-green metallic color for eye comfort. ★ Ask your VEMCO dealer for a demonstration or write today for illustrated catalog covering drafting machines and drawing instruments.

V&E MANUFACTURING CO.
PASADENA 2, CALIFORNIA

▲ For more details circle NED-1430 on enclosed inquiry slip ▲

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS • OILS • POWDERS • PASTES
COMBINED LIQUIDS AND SOLIDS
1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

Totally enclosed, manual or automatic. Accuracy as close as ±½%. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F. Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

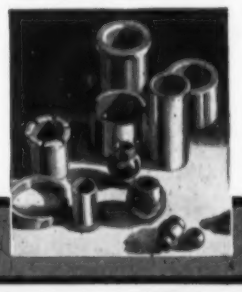
G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

▲ For more details circle NED-1431 on enclosed inquiry slip ▲

Can You Use SELF-LUBRICATING JOHNSON LEDALOYL BEARINGS?

IF SO, YOU WILL SAVE MONEY

NEW USES for these porous, oil-impregnated bearings are being discovered every month. You may need them for applications difficult to lubricate. They may even be sealed in place. Made by powder metallurgy, they are very low in cost. Johnson engineers will assist you in determining whether Ledaloyl Bearings can be used to advantage. Write today.



Johnson Bronze
SLEEVE BEARING HEADQUARTERS
580 SOUTH MILL STREET • NEW CASTLE, PA.

▲ For more details circle NED-1432 on enclosed inquiry slip ▲

ALL INFORMATION, METHODS, AND IDEAS NEEDED TO PRODUCE BETTER TOOLS AND DIES

Practical Data on Popular Analyses of Tool Steels, their Selection, Heat Treatment, and Use

in the Revised, Enlarged SIXTEENTH PRINTING of this

TOOL and DIE STEEL HANDBOOK

By Palmer and Luerssen

Here's the BOOK OF ANSWERS for every man responsible for tools and dies. Shows you how to increase your company's production from present equipment—how to reduce toolmaking trial and error, conserve tool steel, avoid die troubles, simplify heat treatment. Gives complete working information on everything from selection of the right steel to heat treating methods and equipment, hardness and toughness testing, latest data on high speed and hot work steels. 564 pages, 355 charts, photos, diagrams give you facts on: how design affects heat treatment, hardenability tests, time required to heat different tools to required hardening and drawing temperatures, furnace atmospheres, quenching, tempering, trouble-shooting.

INCLUDING 80-PAGE ALPHABETICAL SELECTOR, BOUND RIGHT IN THE BOOK, SHOWING WHICH STEEL TO USE FOR ALMOST EVERY TOOL AND DIE. Use this book to train new men and upgrade skilled men.

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THE CARPENTER STEEL CO. • READING, PA. • DEPT. 19X-2

Please send me, postpaid, your revised "Tool Steel Simplified". I enclose $2.00 ($2.50 outside U.S.A.) in full payment of the book.

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FIRM NAME_____
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CITY_____ STATE_____
(Please print)

▲ For more details circle NED-1433 on enclosed inquiry slip ▲

STOP ACCIDENTS with BRADY SAFETY SIGNS

Here's an AMAZING BRAND NEW SAFETY SIGN that will be welcomed by Safety Men! Brady Safety Signs stick to wood, glass, metal, concrete, etc. without moistening. May be applied to any clean surface in a jiffy. No screws, nails, bolts or skilled help necessary. All you do is peel from card, apply where wanted and the sign is up to stay.

Brady Safety Signs are made of durable cotton cloth, Silicone Coated to resist dirt, grime and moisture. CONFORM TO ASA Standard Z35.1-41. Select your requirements from a complete catalog of standard safety messages. Cost only a few cents per sign. Immediate delivery. Specials made to order.

WRITE FOR Free SAMPLES AND USEFUL CATALOG

WIRE MARKERS · PIPE MARKERS · SAFETY SIGNS · PRINTED "SCOTCH" TAPE · MASKS & STENCILS

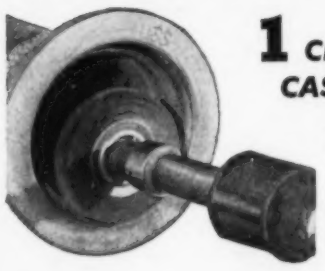
MANUFACTURERS OF SELF-STICKING PRODUCTS

W.H. BRADY COMPANY

1669 E. SPRING STREET • CHIPPEWA FALLS, WIS.

For more details circle NED-1434 on enclosed inquiry slip

Pittsburgh Brushes Solved these Problems!



1 CLEANING RED-HOT CASTINGS in 30 seconds!

A Pittsburgh brush answered U. S. Pipe and Foundry's problem of cleaning red-hot castings. This rugged brush works 40 hours a week, turning out thoroughly cleaned castings at the rate of one every 30 seconds . . . a speed record for any brush cleaning operation of this type.

2 POLISHING 10,000 heating units!

When the Edwin L. Wiegand Company wanted to remove ragged edges from their *Chromalox* Heating Units economically and *fast*, they turned to rough, tough Pittsburgh Brushes for the answer. The 6" Pittsburgh steel wire brushes they installed polish 10,000 heating units during their life.

3 CLEANING WELDS in close quarters!

Allis-Chalmers' problem was to find a brush narrow enough to fit between cooling fins of transformer radiators, yet strong enough to remove slag and spall on welds which could conceal pressure-reducing pinholes. Pittsburgh engineers recommended an 8" rotary wire brush. Problem was solved!

Let Pittsburgh Engineers Solve Your Brush Problems.

Pittsburgh's complete line of brushes of every type, for every purpose, will provide a practical and economical solution of any brush problem you might have. Drop us a line on your company letterhead for a copy of our new booklet that shows, through actual case histories, how Pittsburgh can help cut your brushing operation costs. Address: PITTSBURGH PLATE GLASS COMPANY, *Brush Div.*, Dept. M-4, 3221 Frederick Ave., Baltimore 29, Maryland.

PITTSBURGH *Power Driven* BRUSHES

BRUSHES • PAINTS • GLASS • CHEMICALS • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

For more details circle NED-1435 on enclosed inquiry slip

PAINT CAN LIP acts as brush rest and wiper

Functioning as brush rest, wiper and can carrier, Paint-Boy paint can attachment reduces paint losses from running and dripping. Combining plastic lip and wire handle, it is made in sizes to fit both quart and gallon cans. Attachment is wider than can, thereby preventing paint from running down can sides. It also assures air-tight seal because cover is replaced on clean top. When used as brush wiper or brush rest with handle leaning against wire bail, excess paint drains back into can. Made by **Norton Laboratories, Inc.**, Norloc Div., Mills St., Lockport, N. Y.

For more details circle NED-1436 on enclosed inquiry slip

SHOP CART has 3-in. rubber-tired casters

Shelves of Scotty factory or stockroom cart have 1-in. retaining lip on all four sides to prevent contents from rolling off. Welded unit is equipped with drawer and 3-in. rubber-tired casters. Legs are punched to accommodate one or two additional shelves. Dimensions are: height, 33⅝ in.; top and shelves, 29 x 18 in.; drawer, 13½ x 17¾ x 4 in.; and weight is 60 lb. Finish is gray baked Hammerloid enamel. Made by **Natkin & Co.**, 1603 S. Hanley Rd., St. Louis 17, Mo.

For more details circle NED-1437 on enclosed inquiry slip

WELDING POSITIONER table rotates at variable speeds

Remote pushbutton control station on model 21 automatic welding positioner makes variable or constant speed immediately available. Table rotates at any infinitely variable speed from 0 to 2.7 rpm and at 4 rpm constant speed. Speed is indicated on electric tachometer. Electric clutches and brake instantly stop table which is tilted 135 degrees in 23.4 seconds by 3-hp motor. Entire body of positioner raises 24 inches by 3-hp brake motor. The 5000-lb capacity positioner is mounted on 8-in. grooved casters that raise base 2 in. off floor. Made by **Aronson Machine Co.**, Dept. ND, Arcade, N. Y.

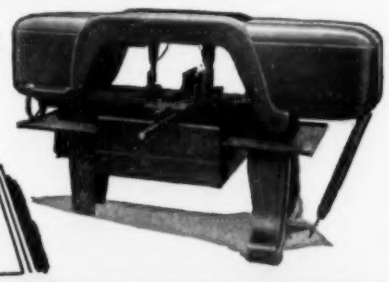
For more details circle NED-1438 on enclosed inquiry slip

As an added safety feature, all Model "J"

JOHNSON METAL CUT-OFF BAND SAWS

come equipped with a BLADE GUARD. This guard is located between the Left Frame and Guides. It covers the exposed cutting portion of the blade as a means of protection. The Guard can be readily removed to change blade. Model J (illustrated), heavy, sturdy, cuts 10" rounds, 18" flats.

Also Model B, lighter, portable, rigid. Cuts 5" rounds, 10" flats.



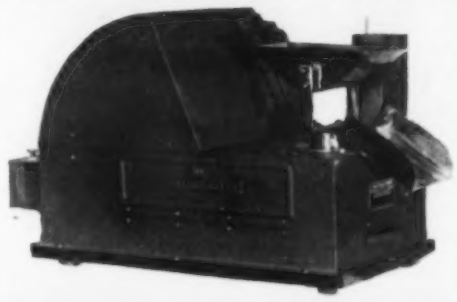
Write for CATALOG!

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

For more details circle NED-1439 on enclosed inquiry slip

A NEW Time Saving Precision Weighing Unit . . . .

Many products made in the past depended upon skill alone. Since skill is a personal element lack of uniformity was the result. This lack of uniformity was due to formulae failure which brought forth a high percentage of rejection in finished parts. Simple pre-determined weighing corrects this fault, improves finished parts, cuts costs and waste of materials. Newest weighing unit for solving this problem is EXACT WEIGHT Shadograph (illustrated). Features high precision accuracy . . . automatic dump to speed up operation . . .is the last word in precision compounding equipment. Unit is entirely electrically operated. Write for complete specifications to fit your particular operation.



EXACT WEIGHT SCALES *Industrial Precision*

THE EXACT WEIGHT SCALE COMPANY
930 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St., W., Toronto 18, Canada

For more details circle NED-1440 on enclosed inquiry slip

for easier MATERIALS HANDLING

STRONG! TOUGH !! LIGHT !!!

TRUCKS & TOTE BOXES

You can't get more wear or longer life from any other type of tote-box or truck, than you get *built right in* these lightweight, vulcanized and reinforced

BAL PLASTIC FIBRE PRODUCTS

So light that girls can handle them loaded with lightweight parts; sturdy enough to carry heavy parts and defy constant usage and drudgery. Double-strength corners; steel "elbows" to word off damage. Hard smooth surfaces with no rough edges. Made in all sizes. Catalog shows many types of trucks; tote-boxes for many industrial needs. *Send for details!*

"BAL" BUILT WITH A CONSCIENCE

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N. J.

For more details circle NED-1441 on enclosed inquiry slip

CHAMPION DECLARES WAR ON WASTE

OFFERS 3 PRACTICAL PLANS TO COMBAT COSTLY HANDICAPS TO PRODUCTIVITY

1. **Champion's PLANNED CLEANING PROGRAM** Dust and dirt absorb light paid for through electric bills. Champion's Program restores normal lighting efficiency, helps maintain maximum economy.

2. **Champion's FLUORESCENT LAMP GROUP REPLACEMENT PLAN**—Replacing lamps one at a time takes about 20 minutes, interrupts Productivity. "GR" drastically cuts these unnecessary costs.

3. **Champion's INCANDESCENT LAMP GROUP REPLACEMENT PLAN**—"GR" savings average about 60% in labor time, labor costs alone. Applied to incandescent lamps, "GR" saves even more!

Use any or all 3 Plans for better lighting, greater economy in factories and offices. Champion's "War on Waste" File, containing all 3 Plans with formulas, charts, practical examples, is offered without cost to responsible executives. Write for your copy to

CHAMPION SINCE 1900

CHAMPION LAMP WORKS
Lynn, Massachusetts
A DIVISION OF CONSOLIDATED ELECTRIC LAMP CO.

For more details circle NED-1442 on enclosed inquiry slip

HEAVY LOADS *roll* Smooth and Easy

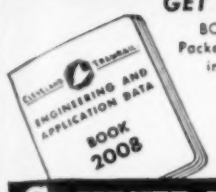
Starting Effort . . . 15 lbs.
Running Effort . . 10 lbs.
per ton weight

A simple, inexpensive, hand-propelled Cleveland Tramrail overhead materials handling system will pay for itself in a short time.

Overhead rails and transfer bridges make it possible to transport heavy loads directly to destination without in-between handling in a fraction of the time required for hand-handling.

GET THIS BOOK!

BOOK No. 2008
Packed with valuable information...



CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6642 East 285th Street, Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle **NED-1443** on enclosed inquiry slip

You can't blame Pop. Using the wrong file for the job is a costly tool abuse. For example:

Stainless steel is a tough, dense metal which tends to have a wearing effect on all cutting tools—and files are no exception. Better results are obtained when Nicholson or Black Diamond files "For Stainless Steel" (stamped on tang) are selected. Made with specially sharpened teeth to assure faster cutting and longer file life. Same types and sizes as regular-purpose files. Sold through industrial distributors.

THE NATIONAL DEFENSE PROGRAM calls for again conserving steel. You can aid by making files last longer – (1) through proper use and care; (2) through use of *The right file for the job.*

NICHOLSON FILE CO., 34 Acorn St., Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON *A FILE FOR EVERY PURPOSE*

For more details circle **NED-1444** on enclosed inquiry slip

Time available FOR CENTRIFUGAL CASTING

Non-Gran supplies both aluminum and tin bronze centrifugal castings, as well as bronze sand castings. Send prints. American Non-Gran Bronze Co., Berwyn, Pa.

PRECISION MACHINE WORK
NON-GRAN
CASTINGS • SAND & CENTRIFUGAL

For more details circle **NED-1445** on enclosed inquiry slip

TOTE BOX CONVEYOR TRAY for overhead monorail systems

Nine tiered NesTier tote boxes is capacity of conveyor tray designed for use on either hand-operated or motorized monorails. Made of steel plate, conveyor tray is intended for overhead monorail systems for order make-up. Units are available for use with both large and small size Nestier tote boxes, some of which are shown on tray. Also available are adapters for using twin-end boxes on overhead trolley, chain or cable conveyors. Adapters hold boxes level, even on inclines. Made by **Charles William Doepke Mfg. Co.,** Dept. NED, Rossmoyne, O.

For more details circle **NED-1446** on enclosed inquiry slip

THREAD RING GAGES made of titanium carbide

Combination of titanium and carbide used in line of lightweight thread ring gages is known as Demark. Exhibiting good wear life, gages are made to such a degree of accuracy that special wear check plug is provided with each ring. Each gage has serial number engraved on metal. Lead, angle, diameter and hardness is recorded and filed under that number. Made by **Pipe Machinery Co.,** 934 E. 70th St., Cleveland 3, O.

For more details circle **NED-1447** on enclosed inquiry slip

TEMPERATURE RELIEF VALVE for hot water tanks and heaters

Tested, rated and listed by American Gas Association for heat input up to 1.2 million Btu per hour, McDonnell No. 201 temperature relief valve of automatic reseating type is designed to prevent excessive water temperatures in hot water tanks and heaters. Vernatherm hermetically sealed element incorporated in valve contains chemical mixture of organic and metallic particles which expands and contracts in response to temperature variations. Internal forces created by temperature changes open and close valve orifice. Valve starts to open at 188° F and reaches maximum capacity at 208° F. Tests show life of about 10,000 cycles. It is suitable for operating pressures up to 125 lb. All three connections are ¾-in. tapped. Made by **McDonnell & Miller, Inc.,** 3500 N. Spaulding Ave., Chicago 18, Ill.

No. 201

For more details circle **NED-1448** on enclosed inquiry slip

BLOW for BLOW

YOU CAN'T BEAT SPO AIR VIBRATORS

Powerful hammer-like blows delivered by **SPO** air vibrators assure steady jam-free flow of granular or powdered materials. These dependable, low-cost units prevent clogging and packing in bins, hoppers and chutes.

All **SPO** vibrators incorporate a **special corrosion-proof bronze alloy cylinder liner** that provides full-power starting, high-speed operation, thorough lubrication and maximum service life.

SPO offers a complete range of types and sizes to meet every vibration requirement.

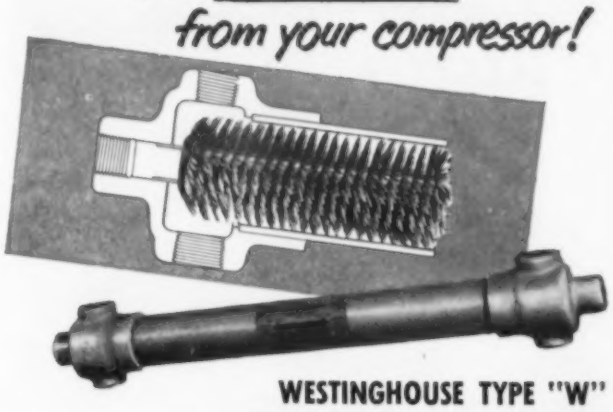
Write today for Bulletin 50 for complete details.

386 S1

SPO INCORPORATED
6475 Grand Division Ave. • Cleveland 25, Ohio

For more details circle **NED-1449** on enclosed inquiry slip

Get DRY AIR *from your compressor!*



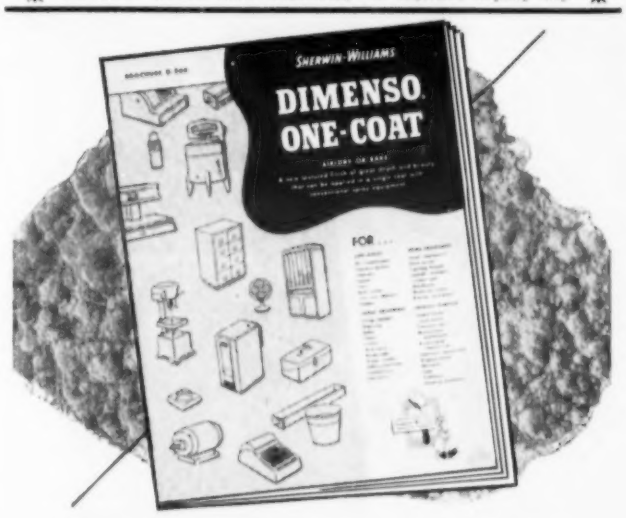
WESTINGHOUSE TYPE "W" WATER-COOLED AFTERCOOLER

Easily installed . . . delivers *dry* compressed air for paint spray, laundry equipment, controls, dental laboratories and other applications. Central water-cooled core is high-efficiency spined copper tubing within 2½ O.D. steel tubing with brass header. Water connections at end, air connections at top, drains at bottom of headers. Drain cock or automatic drain valve optional. Three sizes . . . for 1½ and 2 HP, 3 and 5 HP, and 7½ and 10 HP compressors. Write for Bulletin 9460-21 and name of nearest distributor.

INDUSTRIAL PRODUCTS DIVISION — WESTINGHOUSE AIR BRAKE COMPANY WILMERDING, PENNA.

Factory Branch: Emeryville, Calif. • Distributors throughout the United States . . . Consult your Classified Directory • Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario

For more details circle **NED-1450** on enclosed inquiry slip



SPECIAL EFFECTS ...without *special equipment*

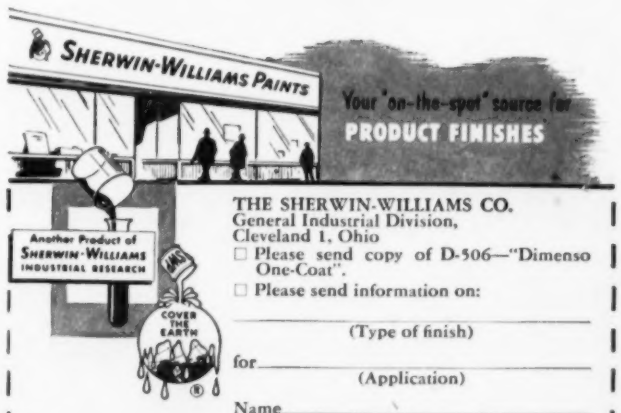
Here's the quick, easy way to get rich, lustrous, hammered-finish effects—*without* hammering—*without* special spray equipment or methods!

Sherwin-Williams Dimenso One-Coat enables you to give ordinary, flat metal surfaces beautiful three-dimension hammered effects with a single coat, with conventional spray equipment. Dimenso One-Coat relieves the monotony of large, plain surfaces . . . can be air-dried or baked . . . provides a finish of great depth and brilliance. Or, by adjusting method of application, deep opalescent effects can be obtained with the same material.

Dimenso One-Coat is one of a complete line of industrial quality product finishes available through Sherwin-Williams Branches in all principal cities.

Ask for a copy of descriptive brochure D-506 from your local Sherwin-Williams Branch, or write The Sherwin-Williams Co., General Industrial Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES



THE SHERWIN-WILLIAMS CO.
General Industrial Division,
Cleveland 1, Ohio
☐ Please send copy of D-506—"Dimenso One-Coat".
☐ Please send information on:
_____ (Type of finish)
for _____ (Application)
Name _____
Company _____
Address _____

For more details circle **NED-1451** on enclosed inquiry slip

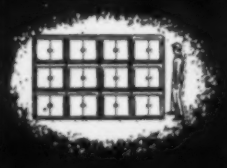
GRIEVE-HENDRY PORTABLE ELECTRIC OVENS...

Standard Models For Every Special Need!

Model CR-1

10 cu. ft. capacity—30" wide x 25" deep x 24" high. Removable shelves and drip pan. . . . . $79.50 f.o.b. Chicago

Portable. Costs less than 5c per hour to operate. Adjustable temperature control to 225° F. Fan driven forced air circulation. Uniform temperature throughout. Plugs into any 110V wall outlet—no special wiring required.



Can be used in a group or bank. Use them on the production line —save handling—hauling.

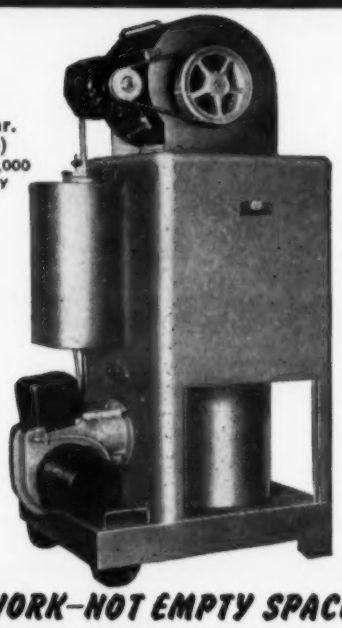
Other standard models with temperature ranges to 1000°F. available. Write for literature.

GRIEVE-HENDRY CO., INC.

1647 W. HADDON STREET CHICAGO 22, ILL.

For more details circle NED-1452 on enclosed inquiry slip

FAGEOL heat machines give you heat instantly where you need it!



140,000 B.T.U. per hr. (no chimney or flue)

Other models available in 160,000 and 200,000 B.T.U. capacity

MODEL PW-140

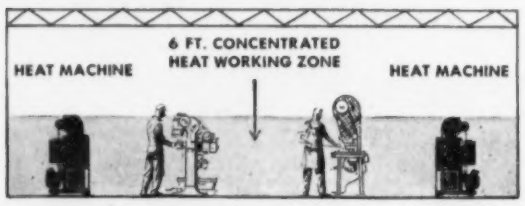
HEAT MEN AT WORK—NOT EMPTY SPACES

Just snap the switch!

Your Fageol Heat Machine will instantly pour out heat for keeping men warm at work, thawing materials and equipment, drying, treating, curing, heating buildings . . . 1,000 plus one other uses.

By blowing warm air out along the floor or ground, each Heat Machine creates a 6 ft. high heat blanket over areas from 1,600 to 3,000 sq. ft. Unlike ordinary space heaters, they heat where men work. Consequently, operating on No. 1, 2 or 3 fuel oil or kerosene, they save greatly on fuel costs.

Write today for Bulletin L-4782. A-4841



HEAT THE WORK ZONE

Fageol HEAT MACHINE CO.

FAGEOL HEAT MACHINE CO.

5725 Mt. Elliott Ave. • Detroit 11, Mich.

For more details circle NED-1453 on enclosed inquiry slip

INDUSTRIAL AIR COMPRESSOR
3 and 5-hp units develop to 175 psi

Of four cylinder V-type design, 3 and 5-hp two-stage air compressors are designed to deliver pressures of 125 and 175 psi for heavy duty industrial service. Heat is dissipated rapidly by finned cylinder blocks, heads, intercoolers and check valve, aided by fan type flywheel. Counterbalanced operating parts prevent vibration and assure smooth, quiet operation. Automatic pressure switch starts motor when pressure drops and stops motor when desired maximum pressure is reached. ASME air receivers and high starting torque motors are standard equipment. Made by **DeVilbiss Co.**, 301 Phillips Ave., Toledo 1, O.

For more details circle NED-1454 on enclosed inquiry slip

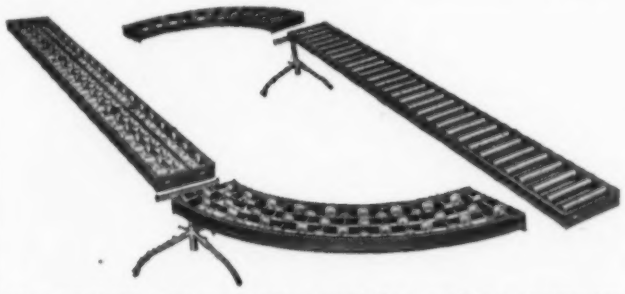
AIRCRAFT STRUCTURAL PLASTIC
good flexural strength up to 500° F

Developed for use as structural material in manufacture of high-speed aircraft and guided missiles, Vibrin X-1047 polyester laminating resin withstands temperatures as high as 500° F. Resin has physical and handling properties comparable to other polyesters, plus the characteristic of high strength at high temperatures. Laminates made with glass fabric return flexural strength of 40,000 to 47,000 psi when exposed as long as 200 hours at 300° F, and over 30,000 psi when exposed for up to 24 hours at 500° F. Heat resisting properties are due to use of chemical triallyl cyanurate. Resin will be supplied for applications in electrical, electronic, radio and television industries. Made by **United States Rubber Co.**, Naugatuck Chemical Div., Naugatuck, Conn.

For more details circle NED-1455 on enclosed inquiry slip

WHEEL & ROLLER CONVEYORS
treated with penetrating oil

All bearings and working parts of Carter Black Velvet wheel and roller conveyors are treated with a deep-penetrating oil for self-lubricated operation. Process



also imparts rust preventive qualities, making equipment suitable for operations in locations where rust, corrosion, galling and abrasive conditions prevail. Conveyors are included in line of conveyor equipment and machinery made by **Oral T. Carter & Associates, Inc.**, 1705 Dreman St., Cincinnati 23, O.

For more details circle NED-1456 on enclosed inquiry slip

With a valve to suit the job air cylinders can be made to work wonders. Mead Air Valves, Single and Double Acting Air Cylinders, will help you cut costs, speed up work. Write for complete new Catalog of famous Mead air-operated devices!

MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. NA-22, CHICAGO 41, ILL.

For more details circle NED-1457 on enclosed inquiry slip

MARKEM made to make your MARK

MARKEM helps make their names famous

Under these trade marks are made products ranging from nylons to aircraft. They include garments, hosiery, knit goods and textiles, radio and TV tubes, capacitors and resistors, vulcanizing equipment, cameras, pharmaceuticals, hand grenades, cartridges and canvas goods. All over the world, Markem methods, machines, type and inks are marking the products of industry.

There is a Markem method for almost every identification purpose. Markem Equipment is used for Marking on Products, Packages, Parts, or for producing Labels.

Submit *your* problem in detail with a sample of the item to be marked. Markem Machine Company, Keene, New Hampshire.

MARKEM BETTER MARKING SINCE 1911

For more details circle NED-1458 on enclosed inquiry slip

CRANE WHEELS AND WHEEL ASSEMBLIES

INSTALL THESE WHEEL ASSEMBLIES complete with axles, bearings, drive gears, grease fittings and all necessary parts for a complete installation. There are sizes, types, and styles of mounting to suit every requirement.

DOUBLE FLANGED WHEELS range in standard tread diameters from 7½" to 24"; SINGLE FLANGED WHEELS from 4" to 8". Wheels are available unmounted or in completely assembled units.

WRITE FOR CATALOG Complete line of Downs Crane Wheels and Assemblies are illustrated and described in new Catalog No. 3540. Specifications included. Write today!

DOWNS CRANE & HOIST CO.

MECHANICAL ENGINEERS 540 W. VERNON AVENUE LOS ANGELES 37, CALIF.

Electric Cranes • Hand Cranes • Jib Cranes • Sheaves • Sheave Blocks • Plate Grips • Plate Hooks • Crane Trolley Hoists • Crane Wheels • Crane End Truck Units • Jib Crane Fittings • Automatic Mechanical Load Brake Crane Hook Blocks

For more details circle NED-1459 on enclosed inquiry slip

For BALL and PEBBLE Milling

Amazing Grinding Medium

BURUNDUM

- made of "ultra-high" fired ceramic
- tubular shaped for greater grinding area
- extra high specific gravity for faster action
- extremely hard for positive attrition
- long wearing for minimum contamination
- non-porous for easy cleaning
- for use in both wet and dry grinding
- 50% faster grinding than conventional media

Write, today, for bulletin and samples!

U. S. STONEWARE

AKRON 9, OHIO • PROCESS EQUIPMENT DIVISION

For more details circle NED-1460 on enclosed inquiry slip

Quick, Easy Installation—Economical Operation

Chromalox Electric Strip Heaters are modern industry's rugged tool for putting heat wherever it is needed—as in dies, tanks, pipelines, ovens and countless other spots. Chromalox Units can be clamped to any flat or curved surface. They can be tailored to your needs, anywhere a little or a lot of dependable heat is wanted. Easily installed, often with existing power lines, they produce the exact amount of heat required. Lengths from 4" to 96", width from 1" to 2½". See how multi-purpose Chromalox Electric Strip Heaters fit into your plant operations.

Write for Fact Packed CATALOG 50

It's yours without obligation.

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other advertisement on page 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-1461 on enclosed inquiry slip

Big MAN-HOUR Savings

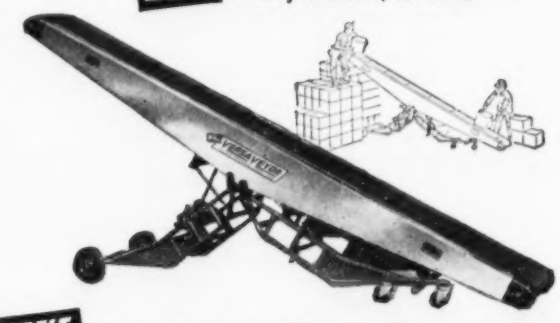
with Belt portable handling equipment, built especially for a variety of industrial jobs!

Stop your material-handling profit leaks by using lightweight, portable and inexpensive Belt conveyor equipment. Reduce the time and cost of scoop-shovel jobs, stacking and storing, loading and unloading packaged goods and bulk materials.

WRITE TODAY FOR PRICES AND LITERATURE!

Lengths—6, 8 or 10 ft. • height of undercarriage easily adjustable • will handle 100 lb. distributed load, 25 lb. maximum unit load • aircraft-quality, aluminum-alloy frame construction • 50 f.p.m. chain speed.

BELT Handy-Handler, Model U



BELT Versaveyor, Bag and Box Handler

Overall lengths—13, 15, 17 or 19 ft. • 18-in. bed • can be operated with or without either or both undercarriages • 60 f.p.m. belt speed • aluminum-alloy frame • 600 lb. distributed load • 150 lb. unit load.

BELT

Model S Handy-Handler

Standard 16-ft. length; also has 4-ft. extension section (special lengths available) • tough, aluminum-alloy construction • weighs 97 lbs. without the easily detachable power unit • can be used with or without dolly.

BELT THE BELT CORPORATION

7402 STAHL ROAD ORIENT, OHIO

For more details circle NED-1462 on enclosed inquiry slip

LIMIT SWITCH controls travel of rotating devices

Travel of any rotating device requiring interruption or establishment of electrical current after predetermined number of revolutions can be controlled by model R-1000-A limit switch. Finished 16-gage reinforced case has walls of sufficient strength to hold entire rotating mechanism in accurate alignment. Optional location of driving shaft makes possible placement on either right or left side by changing position of worm shaft assembly. Worm gear combination has 60 to 1 ratio. Number of revolutions can be increased by using various combinations of driving sprockets, either on shaft of switch, or on sprocket of unit controlled by switch itself. Adjustment of limit cams is easily made. Made by **Crane Electric Co.**, 1439 W. Lake St., Chicago 7, Ill.

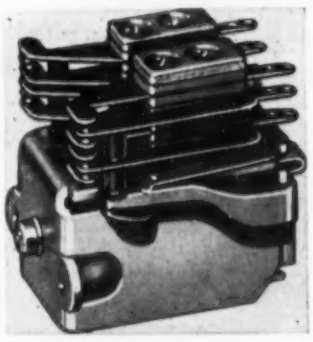
For more details circle NED-1463 on enclosed inquiry slip

ACRYLIC PLASTIC COATING made in various finishes and colors

Drying in 20 seconds without clogging mask around plastic piece, Logoquant series SF coating for acrylic plastics is available in clear, pigmented and metallic finishes and in transparent colors. It is usable on hand and automatic spray machines. Coating withstands cellulose tape tests before and after considerable aging without chipping or peeling. Other tests show resistance to high heat and humidity, salt spray and weather without visible discoloration or deterioration. Made by **Bee Chemical Co.**, Dept. 2, 13799 South Ave. "O", Chicago 33, Ill.

For more details circle NED-1464 on enclosed inquiry slip

LOW-POWER RELAY operates on less than 50 milliwatts

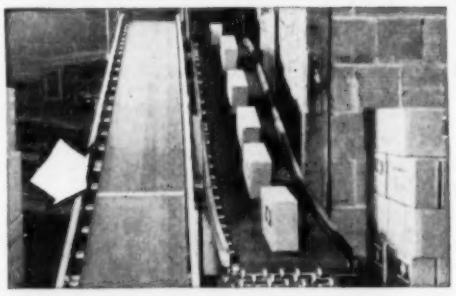


Small, sensitive type N relay is designed to operate on less than 50 milliwatts with a 10,000 ohm coil, single-pole double-throw form-C contact and standard adjustment. With 450-ohm coil and four-pole double-throw form-C contacts, it will operate on 0.7-w, even under conditions of vibration and high ambient temperature. High sensitivity results from close-coupled magnetic circuit, generous use of magnetic iron and efficient coil design. Other features are minimum contact pressure of 30 grams and contact gap of minimum 0.015-in. Relay measures 1⅝ x 1 5/32 x 1⅝ in. and has maximum of ten contact springs. Units with not more than 14 terminals for coil and contact springs can be hermetically sealed in extremely small enclosures. Made by **C. P. Clare & Co.**, 4719 W. Sunnyside Ave., Chicago 30, Ill.

For more details circle NED-1465 on enclosed inquiry slip

ALLIGATOR®

CONVEYOR BELT LACING



*Every Tooth A Vise**

in Long Continuous Lengths for Conveyor Belts . . . . .

- ★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
- ★ In canneries where corrosion or rust is a problem specify Alligator made of Monel.
- ★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
- ★ Separable and smooth on both sides.
- ★ 12 sizes. For belts from 1/16" to 5/8" thick—and *any width.*

Order from Your Supply House. Ask for Bulletin A-60.

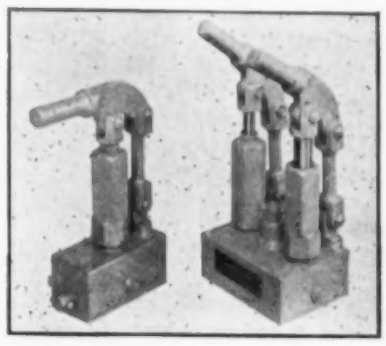
FLEXIBLE STEEL LACING CO. 4664 Lexington St., Chicago 44, Ill.

JUST A HAMMER TO APPLY IT

For more details circle NED-1466 on enclosed inquiry slip

HAND HYDRAULIC PUMP

Single and Double Designs To 20,000 Pounds



Interchangeable Pistons ⅜-½-¾ inch

★

Integral Release Valve

★

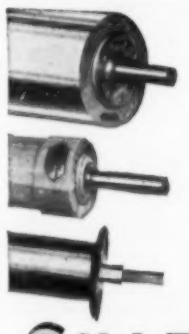
Unit Reservoir 360 cu. in.

Pressure range is 3,000 to 20,000 pounds. Pipe connections measure ¼ inch. Handle length is 18 inches. Weight is 8 to 18 pounds. Can be bolted or welded into position.

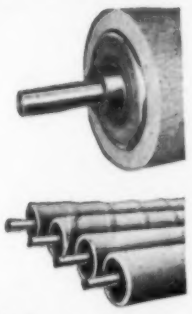
WILLIAM S. PINE

1635 E. 22nd St., Los Angeles 11, Calif.

For more details circle NED-1467 on enclosed inquiry slip

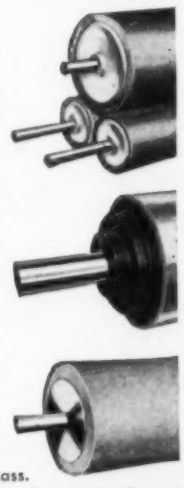


MANY INDUSTRIAL ROLL PROBLEMS are solved by using



SHAF-TITE* ROLLS

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.



SEND FOR NEW CATALOG NO. 48

Most complete publication of its kind

Industrial Roll Division

RODNEY HUNT MACHINE CO.

73 Maple Street, Orange, Mass.

*Reg. U.S. Pat. Off.

For more details circle NED-1468 on enclosed inquiry slip

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each

gives up to 2000 readings

it's this simple:

- Select the Tempilstik° for your working temperature.
- Mark your workpiece with it.
- The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

TEMPIL CORPORATION
132 W. 22nd St., New York 11, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____

COMPANY _____

ADDRESS _____

For more details circle NED-1469 on enclosed inquiry slip

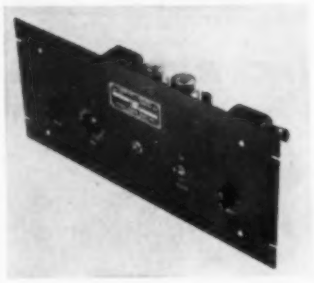
For more details circle NED-1470 on enclosed inquiry slip

FLUSH LATCH
for heavy duty applications

Bolt of No. H-5150 flush latch for heavy duty applications contains spring-loaded button that allows for variations in closure contact and misalignment, thus insuring tight closure of access panels and doors. For use on interior and exterior surfaces, latch opens only when substantial direct pressure is applied. Operating trigger is large enough to make opening easy, even with gloves. Latch is made of heavy gage stainless steel, coated cold rolled steel or heat treated aluminum in many combinations of trigger and bolt offsets. Made by **Hartwell Co.**, 9037 Venice Blvd., Los Angeles 34, Calif.

For more details circle NED-1472 on enclosed inquiry slip

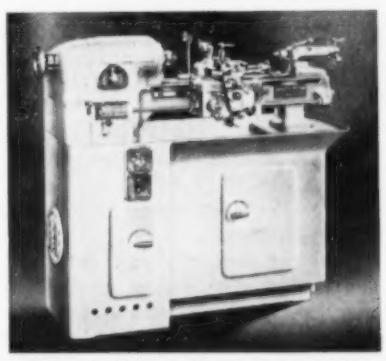
LABORATORY AMPLIFIER
has extended frequency response



With rated power output of 20 w, type 221A laboratory amplifier has frequency response flat from 12,000 to 55,000 cycles with controlled cutoff characteristics beyond for maximum stability and freedom from spurious oscillation and distortion. First-order difference tone intermodulation component is less than 0.1-per cent at full rated peak output and harmonic distortion is under 0.5-per cent at full 20 w output. Hum level is minus 90 decibels below full output. Made by **Hermon Hosmer Scott, Inc.**, Dept. NED, 385 Putnam Ave., Cambridge 39, Mass.

For more details circle NED-1473 on enclosed inquiry slip

PRECISION LATHES
British made, take American collets



Suitable for both toolroom and production purposes, this model L 8-in. swing British-made precision lathe is available in three styles. Lathe can be had with wide range of attachments and is also practical for use as small high speed turret lathe. Model M with 8-in. swing is precise toolroom lathe with spindle speeds ranging from 99 through 1950 rpm, while model A, 9-in. swing, covers speeds from 39 to 1430 rpm. All spindles are on taper roller bearings. Machines take American collets, are calibrated in inches and are wired and motorized to American NEMA standards. Distributed through **British Industries Corp.**, International Machinery Div., Dept. NED-S & B, 164 Duane St., New York 13, N. Y.

For more details circle NED-1474 on enclosed inquiry slip

Costs CUT IN HALF with new electrical tape

Splice, wrap cables and bus bars with *one* tape instead of *two!* No packs, no wraps or compounds needed under Polyken Polyethelene No. 822. *Application and splicing time cut in half.* No. 822 stretches, conforms to irregular surfaces, resists moisture, acids and corrosion. Dielectric strength 10,000 volts.

Write for free samples and folder, "Tape is a Tool." Polyken, Dept. NEB, 222 West Adams St., Chicago 6, Ill.

ONE OF THE NEW
Polyken® ELECTRICAL TAPES
TAILORED TO YOUR JOB

Polyken Industrial Tape, Department of Bauer & Black, Division of The Kendall Company

For more details circle NED-1476 on enclosed inquiry slip

NEW FRACTIONAL H.P. STARTER HAS ALL THE FEATURES!

- Quick-make, quick-break contact mechanism
- Single or double pole construction
- Double-break contacts of fine silver
- Modern styling
- Straight-thru wiring with convenient terminals—generous wire space
- Dependable melting alloy type overload protection—trip-free
- Definite trip indication
- Interchangeable overload relay units accessible from the front
- Open type starter can be used with standard switch box and flushplate

RATINGS: *Double pole:* 1 H.P., 115—230 volts A.C. or D.C. *Single pole:* 1 H.P., 115—230 volts A.C. and ½ H.P., 115—230 volts D.C.

Write for Bulletin 2510A. Address Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin.
ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY
DETROIT • MILWAUKEE • LOS ANGELES

For more details circle NED-1477 on enclosed inquiry slip

MORE SOLD THAN ANY OTHERS
Write for Catalog OF USES AND SPECIFICATIONS

GENERAL Industrial Pneumatic Tires

..SAVE TIME·LABOR·MONEY
Protect equipment and floors • Reduce Breakage

- ★ Wide Base Wheel
- ★ More Air Volume
- ★ More Stability
- ★ More Load Capacity
- ★ Longer Miles in Hi-Speed Service

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 27"—200 to 4000 lbs. cap. for low and high speeds.

Rigid CASTER FORKS *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

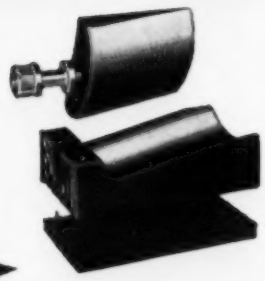
Send for Catalog • Dept. 4

THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

For more details circle NED-1471 on enclosed inquiry slip

NEW Empco JACK Gives you Quick Accurate Machine Leveling and it ABSORBS VIBRATION

New type JACK greatly reduces noise and vibration with VI-SORB Mounting Pads.



VI-SORB Mounting Pads

The combination of a new Empco Jack and VI-SORB is a long step forward in setting and keeping power-driven equipment level while combating the destructive forces of vibration.

Empco Jacks are self-aligning to give you the quickest, easiest, most accurate machine leveling ever known.

For precise machine leveling and maintenance you will save time and money if you use Empco Jacks with VI-SORB Mounting Pads. Write for complete information and prices today!

Remember: A level machine—kept on the level—does better work and lasts longer.

EMPCO PRODUCTS

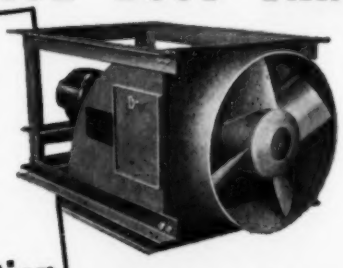
THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

For more details circle NED-1475 on enclosed inquiry slip

Wing

ELBOW TYPE DUCT FANS

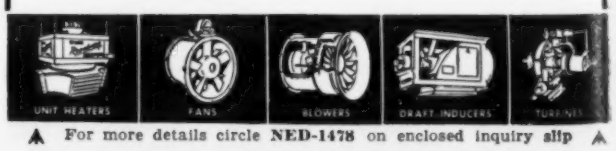
Delivers Large Air Volumes with Low Power Consumption



Complete range of sizes from 10 in. to 60 in.; and from 200 to 85,000 c.f.m.

The Wingfoil Axial Flow Duct Fan, in either elbow type or straight line type, is a compact, economical fan designed to operate against static pressure. The elbow type replaces an elbow in a run of duct, with the motor outside the housing, unaffected by hot or dirty air or gases. Belt or direct drive. Wingfoil "Non-overloading" fan wheel characteristics. Write for bulletin.

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey



For more details circle NED-1478 on enclosed inquiry slip

3 VALUES!

★ One Piece Construction
★ Wide Wire Range
★ Economically Priced

BLACKBURN *Hi-Strength* **TERMINAL LUGS**

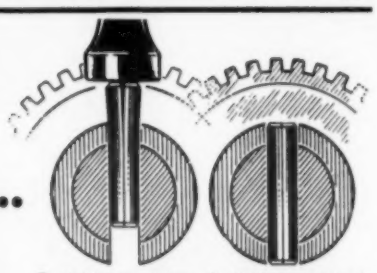
Strongly constructed—all in one piece—yet small and compact, to fit in tight quarters. UL approved. Only 6 sizes cover a range from No. 14 to 1,000,000 CM. Specify Blackburn and get a quality lug in the low price field.

JASPER BLACKBURN CORP.
35 Madison St., St. Louis 6, Mo., CEntral 3007

▲ For more details circle **NED-1479** on enclosed inquiry slip ▲

FREE

try Rollpins... ESNA'S new self-locking fasteners



1 Rollpins drive easily into any standard drilled hole that is held to normal drill-hole tolerances, they eliminate costly taper reaming and peening operations. Chamfered ends speed hand or jig assembly methods.

2 Rollpins, slotted and tubular in form and oversize in relation to standard fractional drill sizes, are compressed as they are driven into the hole. Compression locks them in position, holds tight against vibration.

You'll be amazed by the design flexibility of the Rollpin . . . the way it can replace tapered pins, grooved pins, and straight pins . . . the way Rollpins provide simplified lower-cost, vibration-proof assemblies. That's why ESNA wants you to try this free Rollpin sample package.

Test Rollpins on your own production line. Use them as steel fastening pins for holding pulleys and gears to shafts; as pivot or hinge pins, clevis pins, cotter keys, shafts, and locating dowels—they exceed the sheer strength of a cold-rolled pin of equal diameter.

For complete Rollpin data and free Rollpin sample package, write to Elastic Stop Nut Corporation of America, 2330 Vauxhall Road, Union, New Jersey.

ROLLPIN **ELASTIC STOP NUT CORP. OF AMERICA** ESNA
2330 VAUXHALL ROAD, UNION, NEW JERSEY

▲ For more details circle **NED-1480** on enclosed inquiry slip ▲

On any metal finishing problem

DEPEND on DU-LITE TO CUT COSTS

Courtesy Artistic Wire Products Co.

For instance ...

Graphitic compound, grease and oil made these wire dish strainers tough to prepare for plating. Upon using Du-Lite's #31 Cleaner, the strainers were thoroughly cleaned, and surfaces prepared for plating, with a saving of 1000 lbs. of cleaning compound per month.

What's YOUR problem?

Du-Lite's service to industry is complete from research on specific metal finishing problems to installation of processing equipment. Du-Lite's line includes cleaners, strippers, blacking agents, wetting agents, passivating agents, rust preventatives, burnishing compounds etc. for any type of metal.

See your nearest Du-Lite Field Engineer or write for more information.

Du-Lite DU-LITE CHEMICAL CORP. MIDDLETOWN • CONN.
METAL FINISHING SPECIALISTS

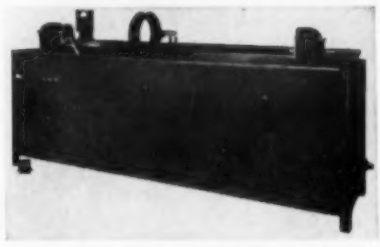
▲ For more details circle **NED-1481** on enclosed inquiry slip ▲

WATER REGULATING VALVES now have flushing feature

Manual flushing feature incorporated in redesigned condenser water regulating, electrically actuated valves WP, WK and WJ provides simple method for removing dirt and grit from line after valve has been installed. Flushing operation is accomplished by turning adjustment screw clockwise as far as possible, then inserting screwdriver between screw and top of push pin. The push pin can then be pried downward and valve held open. After thorough flushing, valve can be reset by removing screwdriver and setting adjustment screw at desired head pressure. Valves made by **Jas. P. Marsh Corp.**, 3505 Howard St., Skokie, Ill.

▲ For more details circle **NED-1482** on enclosed inquiry slip ▲

MAGNETIC INSPECTION UNITS improvements made in entire line



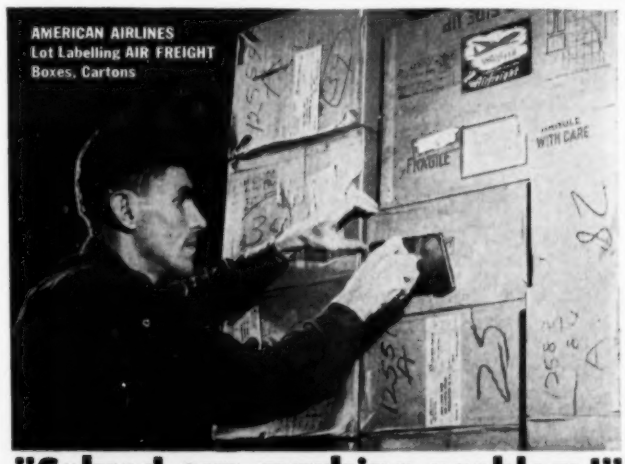
Improvements made in full line of equipment for Magnaflux magnetic particle inspection include increase in size, ability to handle greater diversity of parts, adaptability for either 220 or 440-v 60-cycle current, interchangeability and reduction and simplification of maintenance. Typical units have been increased in size from 48 to 54 in. and from 72 to 96 in. Unit shown is type ARQ with 96 in. capacity and 6000 amp magnetizing current output. Frame and tank design utilizes integral welding. Folding Magnaglo hoods are available for all new type units. Made by **Magnaflux Corp.**, 5916 Northwest Highway, Chicago 31, Ill.

▲ For more details circle **NED-1483** on enclosed inquiry slip ▲

SELF-DUMPING TRAILER can be pulled, lifted and towed

Self-dumping, ½-cu yd capacity model T-SRF-½ Phil-Dump trailer can be pulled by hand, lifted and transported by fork lift truck or towed singly or in trains by industrial tractor. Design includes tongue for manual and tractor handling and pockets for fork truck prongs. Of heavy gage welded steel construction, trailer has roller bearing wheels with solid rubber tires. Two of wheels are castered. Balance of hopper is such that when safety catch is released the load is emptied. Hopper then returns to loading position automatically and safety catch re-engages. Made by **Phillips Mine & Mill Supply Co.**, 2303 Jane St., Pittsburgh 3, Pa.

▲ For more details circle **NED-1484** on enclosed inquiry slip ▲



"Solved our marking problem!" say users everywhere

"The *MULTISTAMP* Hand Stamp Stencil Duplicator is the best thing we've seen for shipping tag and label addressing" . . "for marking boxes, cartons, packages." Quick, clean, accurate, easy-to-use. Prints *1000* or more clear, sharp copies from *one stencil . . one inking*. Just type, write, trace or draw on low-cost stencil, snap in position and print . . like using a rubber-stamp. Non-mechanical, of non-corrosive metal. No moving parts, has replaceable ink pads. 8 complete outfits, $9.50 to $99.50. *Write for folder.*

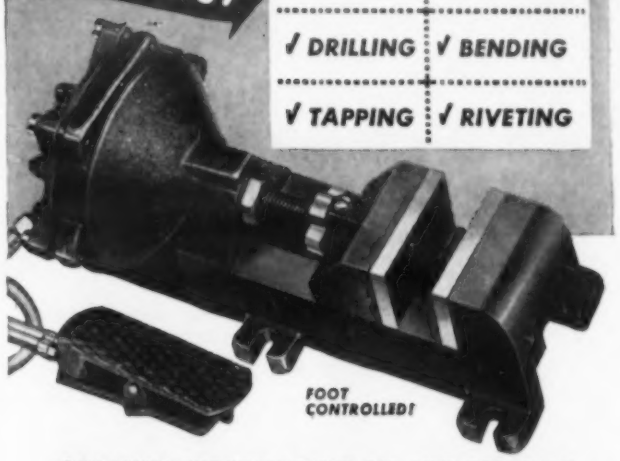
IT PRINTS ON
POSTCARDS SHIPPING TAGS
BOXES CARTONS
LABELS PACKAGES
At Your Office or Shipping Room Supply Dealer

MULTISTAMP STENCIL DUPLICATOR
MANUFACTURED ONLY BY THE MULTISTAMP CO., NORFOLK, VIRGINIA

▲ For more details circle **NED-1485** on enclosed inquiry slip ▲

SPEEDY AIR VISE

SPEEDS UP ✓ MILLING ✓ PUNCHING ✓ DRILLING ✓ BENDING ✓ TAPPING ✓ RIVETING



GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and *Fittings*. . . . . only **$29.90**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

▲ For more details circle **NED-1486** on enclosed inquiry slip ▲

The moral to our story?

Make the job easier for your maintenance personnel . . . and you *automatically* lower your maintenance costs. Let 'em wax as they clean — with a specially formulated material that performs 3 operations in one!

Lustreclean (pine-scented or plain) cleans . . . deodorizes . . . and deposits a light film of wax. Effective on any type of surface! No heavy scrubbing. No rinsing. Mop dry . . . buff the film lightly if a soft satiny finish is desired! Save time and labor cleaning floors, walls, woodwork — wherever excessive wear and heavy traffic has made daily maintenance a back-breaking job.

Lustreclean really cleans! Its emulsifying action loosens the most persistent dirt, grime . . . hard-to-remove rubber burns. No need to use harsh soaps or injurious chemicals. Proof? Ask for a sample and test it on the spots and blemishes your present cleaner won't remove!

Pine Lustreclean *is only one of many WEST products formulated for the promotion of sanitation. Others include floor sealers and waxes . . . washroom service . . . disinfectants . . . deodorants . . . insecticides . . . cleaners . . . soaps . . . protective creams. West is the exclusive distributor of Kotex Sanitary Napkins sold through vending machines.*

WEST DISINFECTING *Company*

42-16 WEST STREET, LONG ISLAND CITY 1, N. Y.
(64 BRANCHES IN U.S. AND CANADA)

SAVE $ $ $ WAX as you WASH

I'd like to try a sample of Lustreclean
Pine-Scented ☐ Plain ☐

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State____ Dept 16

▲ For more details circle **NED-1487** on enclosed inquiry slip ▲

IT'S THE *Usable Production* THAT COUNTS—

...More and More, it's Motch & Merryweather SEGMENTAL SAW BLADES for cutting off LARGER STOCK!

Triple-Chip

Faster cutting with accuracy and safety—that means higher *usable* production. Get these results every time with the Triple-Chip Method and M. & M. segmental saw blades. Our "Hi-Lo" alternately wide-and-narrow tooth grind breaks up chip loads, disperses strains, minimizes breakage, hangs up new production records in cutting off large stock.

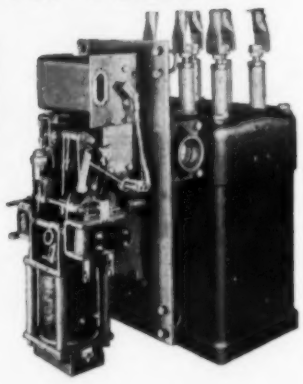
Get our Circular Sawing Handbook.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO
COMMAND OUR UNPARALLELED EXPERIENCE IN CIRCULAR SAWING . . .

▲ For more details circle NED-1488 on enclosed inquiry slip ▲

FULL ELECTRICAL PROTECTION
that Lasts for Years

ALLIS-CHALMERS INDOOR OIL CIRCUIT BREAKERS



INDUSTRIAL ELECTRICAL SERVICE

2300 to 13,800 volts — Up to 500,000 kva interrupting capacity

Type D-20, 7.2 kv, 600 amp, 50,000 kva interrupting capacity oil circuit breaker with solenoid operator and automatic trip.

FOR DEPENDABLE PROTECTION of your electrical equipment, investigate the Allis-Chalmers breaker type that will meet your requirements.

Low maintenance, long life and reliable performance in these modern breakers are the result of over 50 years circuit breaker experience (air or oil). Allis-Chalmers circuit breakers for industry and electric power utilities range from 2500 to 230,000 volts, 15,000 to 10,000,000 kva interrupting capacity.

For complete information on the breaker for your requirements, contact your nearby A-C sales office or write Allis-Chalmers, Milwaukee 1, Wisconsin, specifying voltage and interrupting capacity. A-3504

ALLIS-CHALMERS

▲ For more details circle NED-1489 on enclosed inquiry slip ▲

small size

Yarway Impulse Steam Trap is hardly larger than a pipe union. Easily installed *anywhere.* ½" trap weighs 1¼ lbs.; 2" trap only 8½ lbs. Over 650,000 Yarway traps have been *proved on the job.* Sold by over 200 distributors. For name of nearest one, or free bulletin, write . . .

YARNALL-WARING CO., 131 Mermaid Ave., Phila. 18, Pa.

YARWAY IMPULSE STEAM TRAP

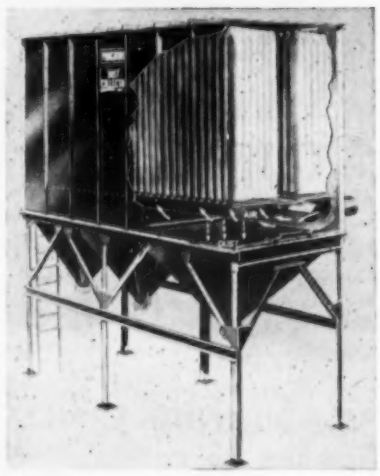
▲ For more details circle NED-1490 on enclosed inquiry slip ▲

ISOLATING TRANSFORMERS
supply voltage without interference

A voltage supply source independent of any line interference or disturbance on primary side is provided by redesigned line of shielded isolating transformers used in testing electronic equipment. In the test room, electric soldering irons, tinning pots, electrical hand tools, clocks and instruments can all be operated from shielded secondary supply. Secondary winding of transformer is completely enclosed in copper electrostatic shield, while metallic shielded secondary cables are integrally attached to copper shield. This shield is usually connected to shielding of test room, which is then connected to ground. Transformer secondary is then in same electrostatic compartment with interior of test room. Ratings are included from ½ to 15 kva with 120 or 240 v primary and 120 v secondary. Made by **Acme Electric Corp.**, 30 Water St., Cuba, N. Y.

▲ For more details circle NED-1491 on enclosed inquiry slip ▲

CLOTH-BAG DUST COLLECTOR
sizes are available to handle practically any volume of dust



Dusts such as carbon black, cork, fine wood, graphite, pigments, lime, soap, metal oxides and fine tobacco are effectively removed from industrial air with this cloth-bag dust collector. Units range from 5 to 40 ft long and contain from 1360 to 10,880 sq ft of filter cloth. They employ from one to six hoppers and are supplied with appropriate structural supports to furnish wheelbarrow, car, truck or any other type of disposal.

Bags are fastened, open end down, by wingnuts to suspension members. Each bag has rubber hem at open nozzle end to insure dust-tight fit to grid plate. By clamping a hand knob, nozzles are sealed over grid openings in floor of collector. Walkway between groups of bags makes it possible to maintain and inspect the collector easily without tools.

Dust-laden air, piped from plant, enters collector at point just under the grid floor. Air loses its velocity, and heavier particles of dust fall immediately into hoppers. Air rises through grid into filter bags which remove practically all remaining dust. Dust captured in bags is removed by shutting down the exhauster and starting the shaker motor. Dust shaken from bags falls into hoppers where it can be removed for reclamation or disposal. Made by **Pangborn Corp.**, 140 Pangborn Blvd., Hagerstown, Md.

▲ For more details circle NED-1492 on enclosed inquiry slip ▲

Solve "small parts" assembly problems

• Assemble • Press
• Rivet • Stake
• Punch • Mark . . .

with ½ ton or 1 ton *Han-D-Press* the new Hannifin air-operated bench press.

write HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave. • Chicago 24, Ill.

▲ For more details circle NED-1493 on enclosed inquiry slip ▲

CUSTOM COMPOUNDING

Take advantage of the long, varied experience of our compounders. Use their "know-how" to get the most out of rubber or elastomeric plastics. Our complete laboratories are at your disposal in solving your problems.

CUSTOM MOLDING

Our modern plant is long on experienced personnel and short on overhead costs. We specialize in the "hard to mold" rubber to metal items, light colors, and short production runs. Precision molding is our keynote.

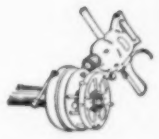
Submit your problem or specification, today.

303C

COLONIAL RUBBER CO.
RAVENNA, OHIO

▲ For more details circle NED-1494 on enclosed inquiry slip ▲

ARMSTRONG BROS.
Better PIPE TOOLS



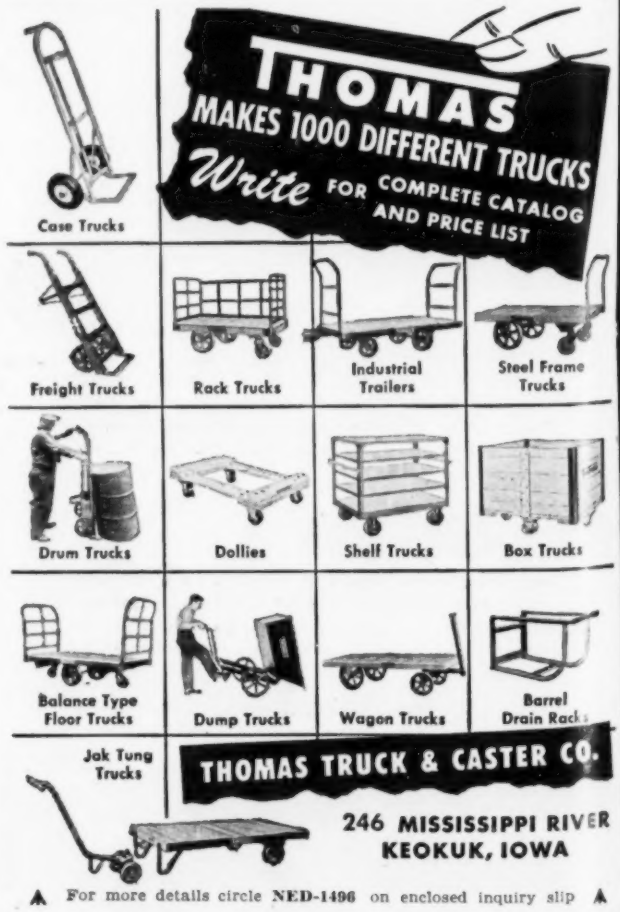
An easier, faster, better way to thread 1" to 2" pipe . . .
WITH POWER!

This light (26 lb.) compact Portable Power Pipe Threader, goes to the job—is operated with a ½" portable electric drill. 1 set of High Speed Steel Chasers do all sizes—just move indicator to 1", 1¼", 1½" or 2" marking. Clamp on pipe and apply drill to drive square. The rest is automatic. Operating on anti-friction bearings with automatic lead, it's a fast, easy way to get smooth, accurate threads.

Write for Catalog

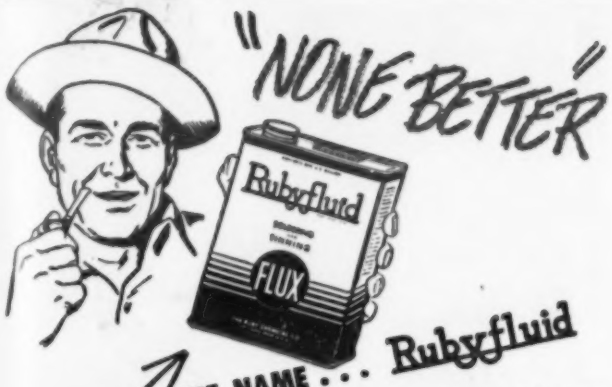
ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVENUE • CHICAGO 30, ILL.

▲ For more details circle NED-1495 on enclosed inquiry slip ▲



THOMAS TRUCK & CASTER CO.
246 MISSISSIPPI RIVER
KEOKUK, IOWA

▲ For more details circle NED-1496 on enclosed inquiry slip ▲



REMEMBER THE NAME . . . Rubyfluid

the easy-to-use Soldering Flux for neat, strong unions.

Use Rubyfluid Flux—liquid or paste—to get neat, strong unions speedily and easily. Rubyfluid is a special fast acting formula, wets out freely, is free from harmful and objectionable fumes, economical to use. Try it—send $1 for special offer—1 pt. liquid, ½ lb. paste flux and helpful booklet.

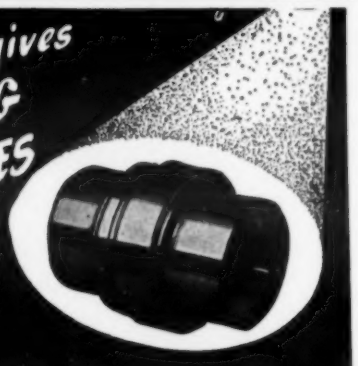
For Stainless Steel use *Ruby's Stainless Steel Flux,* perfected for that metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

For more details circle NED-1497 on enclosed inquiry slip

...this STAR gives OUTSTANDING PERFORMANCES



LOVEJOY FLEXIBLE COUPLINGS

Lovejoy Flexible Couplings do a better job of correcting for misalignment and counteracting vibration, shock, backlash and surge. Free-floating load cushions are suspended between heavy metal jaws . . . last two to five years before changing. No lubrication ever needed on Lovejoy Flexible Couplings.

Write for complete Lovejoy Catalog and Quick-Finding Selector Charts.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake Street Chicago 44, Illinois
Also Mfrs. of Lovejoy Universal Joints and Lovejoy Variable Speed Transmissions

For more details circle NED-1498 on enclosed inquiry slip

TAC does what no other tool can do!

AT LAST! AN OPEN-END RATCHET WRENCH — the world's first true *universal* wrench. A patented design for connections on tubing, rods, piping, conduit, studs, etc. Sixty-four socket sizes from ⅜" to 4". Smallest effective ratcheting arc yet — 5° to 7½°. TAC will also do every job any ordinary ratchet wrench will do: one TAC set replaces literally dozens of single-purpose hand tools.

makers of advanced tools for industry

TAC

TAC is the registered trademark of

TUBING APPLIANCE CO.
7112 South Victoria • 10321 Anza Ave. • Los Angeles, Calif.

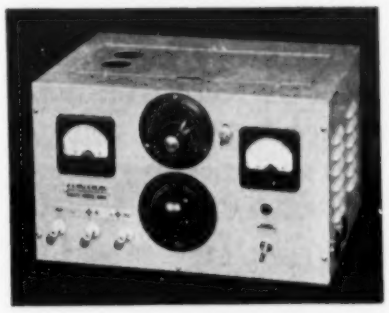
For more details circle NED-1499 on enclosed inquiry slip

SMALL INDUSTRIAL TRACTOR
hauls up to 10,000-lb loads at 3 mph

Particularly suited for materials handling involving skid or pallet loads, Stand-Up Load-Mobile electric tractor has platform only 7 in. above floor for convenience in mounting and dismounting. Single pedal controls both forward and reverse operation. It hauls loads weighing up to 10,000 lb at speed of 3 mph, and no-load speed is 4½ mph. Power is supplied by 340 ampere-hour battery. Sealed ball bearing wheels are used. Made by **Market Forge Co.,** 54 Garvey St., Everett 49, Mass.

For more details circle NED-1500 on enclosed inquiry slip

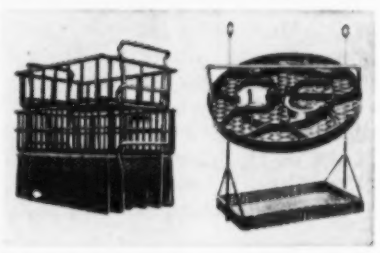
RECTIFIER
for laboratory and plating uses



Among applications listed for Rohco Comet rectifier are electrochemical research, development and testing and small-scale plating of chromium, bright nickel, zinc, cadmium, brass and copper. Minimum ripple, heavy duty unit, made for continuous operation, has input requirement of 110 v, 60 cycle ac, single phase and output of 0 to 6 amp at 0 to 18 v or 0 to 30 amp at 0 to 15 v. It has stepless voltage control from zero to full load and is equipped with 0 to 5 minute interval timer with manual stop. Other features include: dual range, 0-6, 0-30 amp ammeter; single range, 0-20 v voltmeter; and dual convenience outlets for 110 v accessories. Made by **R. O. Hull & Co.,** 1305 Parsons Ct., Rocky River 16, O.

For more details circle NED-1501 on enclosed inquiry slip

RUBBER COATED BASKETS & TRAYS
designed for materials handling uses



Baskets, pans, spacers, chutes, hooks, racks and many other materials handling components can be covered with rubber to permit handling of fragile or precision parts without slippage, marring or scratching. Using seamless dip process or sheet lining, practically any size or type of object can be coated with any thickness of natural or synthetic rubber to meet operating conditions. Engineering aid is offered in connection with coating service by **Automotive Rubber Co.,** 8621 Epworth Blvd., Detroit 4, Mich.

For more details circle NED-1502 on enclosed inquiry slip

the *New* SAF-I-DUO SAFETY GOGGLE

With Replaceable Lens

- Velvety Comfort — VINYL frame fits contour of all faces snugly.
- Lens of Optically Correct OPTILITE or *Acid-resistant* plastic.
- Maximum protection from Impacts, Chemicals and Dust. (Four types of ventilation.)
- Economical — one-piece replacement lens at low cost. (Lens interchangeable with SAF-I-SPEC.)
- Can be worn over prescription glasses.

Write for literature and prices.

UNITED STATES SAFETY SERVICE CO.
KANSAS CITY 6, MISSOURI BRANCHES IN PRINCIPAL INDUSTRIAL CITIES
In Canada PARMELEE, LTD. Toronto

In Canada—PARMELEE LTD., 11 Watkinson Ave.—Toronto 9

For more details circle NED-1503 on enclosed inquiry slip

...Built right...to hold tight—their dependability has been a recognized characteristic of CLARK FASTENERS for close to a Century. 6-1-1a

For more details circle NED-1504 on enclosed inquiry slip

Now—revised and enlarged

...this free booklet for engineers, draftsmen

...here are all the facts on Kodagraph Reproduction Materials (which can be processed by you or your local blueprinter) ...and the many ways they can cut your drafting-room and print-making costs.

"Modern Drawing and Document Reproduction" is concisely written, well illustrated—well worth having. It gives complete information on—

- **Kodagraph Autopositive Papers, Cloth, and Film,** which produce positive photographic intermediates directly—without a negative step; *which* can be handled in ordinary room light—exposed in your direct-process or blueprint machine or vacuum frame . . . and processed in standard photographic solutions.
- **Kodagraph Repro-Negative Paper,** which produces positive photographic intermediates directly from blueprints, Van Dykes, other negative originals. Exposed, processed same as "Autopositive" materials.
- **Kodagraph Contact Papers and Cloth,** which give remarkable results . . . and simplify print-making in all types of contact photocopying equipment.
- **Kodagraph Projection Papers and Cloth,** which enable you to obtain—with your enlarger or process camera—sparkling reproductions from your microfilm or other reduced-scale negatives.

Write today for your free copy of "Modern Drawing and Document Reproduction."

Kodagraph Reproduction Materials

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

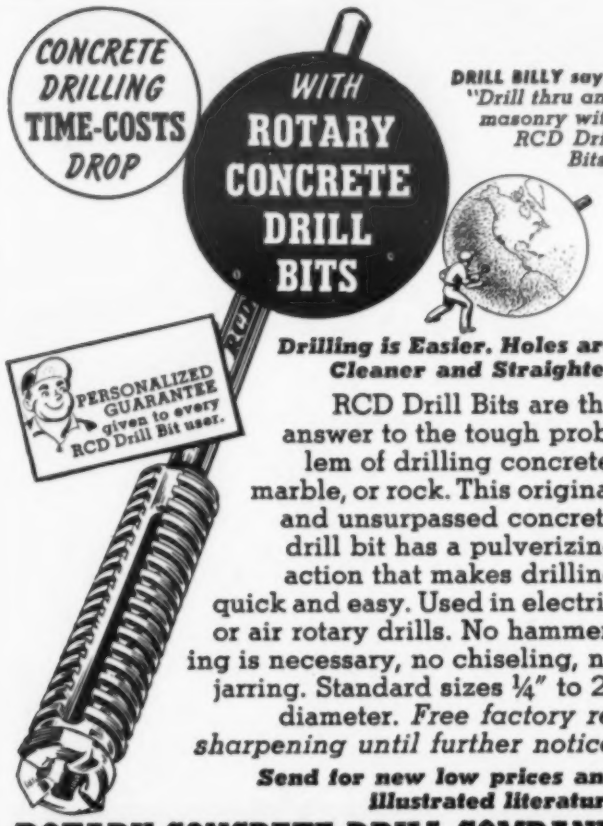
Kodak TRADE MARK

For more details circle NED-1505 on enclosed inquiry slip

CONCRETE DRILLING TIME-COSTS DROP

WITH ROTARY CONCRETE DRILL BITS

DRILL BILLY says: "Drill thru any masonry with RCD Drill Bits"



Drilling is Easier. Holes are Cleaner and Straighter

RCD Drill Bits are the answer to the tough problem of drilling concrete, marble, or rock. This original and unsurpassed concrete drill bit has a pulverizing action that makes drilling quick and easy. Used in electric or air rotary drills. No hammering is necessary, no chiseling, no jarring. Standard sizes ¼" to 2" diameter. *Free factory resharpening until further notice.*

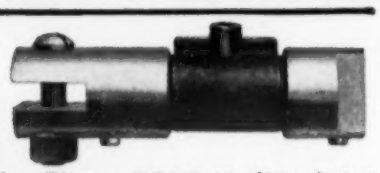
Send for new low prices and illustrated literature

ROTARY CONCRETE DRILL COMPANY

644a S. Arroyo Parkway · Pasadena 1, California

For more details circle NED-1506 on enclosed inquiry slip

QUALITY pneumatic vibrators



Piston Diameters ⅝", ¾", 1", 1⅛" and 1½". (⅝" and ¾" sizes have single-shoulder heads)

2" Piston Diameter.

to keep production on the MOVE

To Tabor, quality means using good metals and practical design to build pneumatic vibrators that operate the instant you need them, stay "on the line," live a long, carefree life. They are easily attached to all types of equipment—bins, chutes, hoppers, screens, etc. They're in the full range of services—from delivering powerful jolts to free frozen coal from hopper cars, to milder vibrations in a fertilizer plant, to gentle nudging of moving bottles in pharmaceutical houses. They add years to equipment life and save countless man-hours of hammering, prodding and poking. A letter today can break a production bottleneck!

THE TABOR MANUFACTURING CO.

6227 TACONY STREET, PHILADELPHIA 35, PA.

For more details circle NED-1507 on enclosed inquiry slip

take your

PIC

for original equipment

THE STRONGER, 100% ZINC PLATED STEEL UNION

Bright . . . good looking . . . sturdy — this 150 lb. steel union appeals especially to makers of original equipment. Uniformly flat sided ends of heavy steel pipe coupling stock make installation fast and easy with open end or pipe wrenches. Special wedge-type bronze seat provides a tight, safe closure. 100% zinc plating—even on threads for complete rust protection. The sensible cost makes a Pic an all-round good buy . . . it's less than a galvanized — no more than a black malleable union!

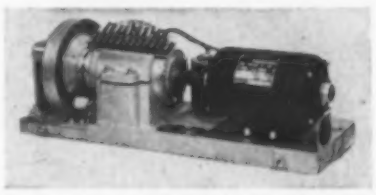
Write for FREE SAMPLES

DART UNION COMPANY

132 Thurbers Avenue, Providence 5, R. I.

For more details circle NED-1508 on enclosed inquiry slip

SHAFT POSITION INDICATOR converts to digital representation



Rapid and accurate detection of angular position of rotating shaft is performed by shaft position indicating systems which also converts resulting indications to digital representation. Shaft-Monitor consists of two major components, an electrochemical locator unit which couples to reference shaft and an electronic converter unit. Magnetic recording mechanism indicates position of reference shaft on command, as often as 20 times per second. Accurate to plus or minus 0.09-degree, measurements can be routed to convenient remote location and displayed as visual indications in digital form, transferred to magnetic tape, punched tape or punched cards for future analysis, or used to perform control functions. Numerous design options are available for flexibility of system application. Made by **Engineering Research Associates, Inc.**, Dept. A, 1900 W. Minnehaha Ave., St. Paul W4, Minn.

For more details circle NED-1509 on enclosed inquiry slip

RAIL FLAW DETECTOR continuously shows rail condition to operator carrying 11-lb unit

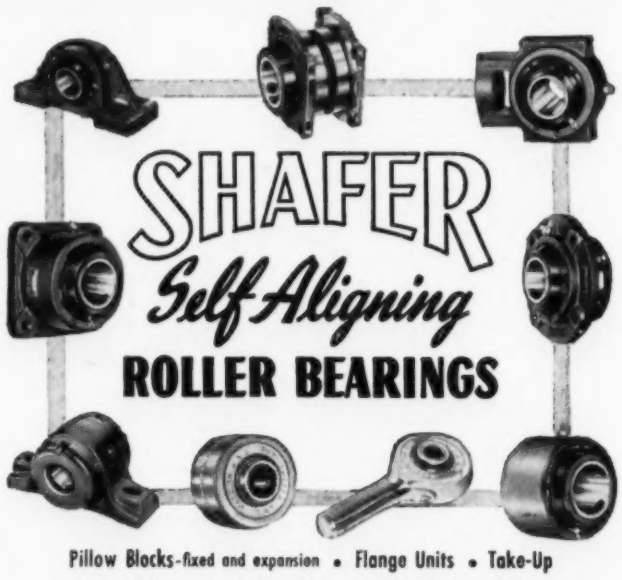
Cracks across web and other rail defects both inside and outside of joint-bar limits, can be detected quickly by nontechnical personnel using Audigage flaw detector. Instrument is battery-powered, weighs only 11 lb and is carried in a knapsack on operator's back. Searching unit, containing vibrating quartz crystal in contact with running surface of rail, is slid along section under test. Condition of rail is indicated continuously by pitch of audible tone in headphones worn by operator.

Joint bars do not effect operation, and use does not obstruct traffic. Defects across web as small as ½-in. long are easily detected, with smaller defects being found by experienced operators. Once controls have been properly set, they do not need readjustment during a test. Two-man crews can test an average of 800 track joints, or frogs and switch points of as many as 40 turnouts, in an 8-hour day. Made by **Branson Instruments, Inc.**, Dept. A, 436 Fairfield Ave., Stamford, Conn.

For more details circle NED-1510 on enclosed inquiry slip

DO YOU KNOW? The dates for the second Chicago International Trade Fair at the Navy Pier have been set for March 22 to April 6. The first fair had an attendance of 250,000 and 2200 exhibitors from 44 nations participated. For full information write Chicago International Trade Fair, Merchandise Mart, Chicago 54, Ill.

For more details circle NED-1511 on enclosed inquiry slip



SHAFER *Self Aligning* ROLLER BEARINGS

Pillow Blocks-fixed and expansion • Flange Units • Take-Up Units • Take-Up and Frame Units • Cartridge Units • Flange Cartridge Units • Duplex Units • Conveyor Rolls • Single and Double Row Bearings • Aircraft Control Bearings

SHAFER CONCAVEX

SHAFER BEARING CORPORATION

801 Burlington Avenue • Downers Grove, Illinois

For more details circle NED-1512 on enclosed inquiry slip

Loaded with Power!

Cushman

"HUSKY"

Sturdy, compact, lightweight Cushman engines are designed to deliver their full rated horsepower hour after hour with maximum economy. Four cycle, single cylinder L-head Cushman engines with three models developing from 1.5 to 6.0 HP are adaptable to hundreds of operations, particularly original installations requiring high-output, long life equipment.

OVER 50 YEARS OF LEADERSHIP

Serviced Internationally by Cushman Motor Scooter Dealers.

Write for Specifications and Prices.

CUSHMAN MOTOR WORKS, INC.

964 No. 21st Street LINCOLN, NEBRASKA

For more details circle NED-1513 on enclosed inquiry slip

NEW LOCKER CATALOG

ANSWERS ALL YOUR CLOTHING STORAGE NEEDS!

- Presents a Complete Range of Locker Types and Sizes.
- Tells How to Provide More Storage in Less Floor Space.
- Gives Newest Ideas on Locker Room Layout, Ventilation, etc.
- Shows How to Make "Custom-Type" Installations with Economical Standard Lockers.
- Lists Ways to Save Time and Money when Ordering.

Send for Your Free Copy Today!

penco *Perma Built* STEEL LOCKERS

SHELVING • CABINETS

Pioneer in Sheet Metal Products Since 1869

PENN METAL Corporation of Penna.

82 OREGON AVE., PHILA. 48, PA.

For more details circle NED-1514 on enclosed inquiry slip

Increase Production of Fines by 300% with

STURTEVANT CENTRIFUGAL AIR SEPARATORS

Accurate Separation of Fines from 40 to 325 Mesh and Finer . . . Output Capacity from ¼ to 50 Tons Per Hour

Records prove that Sturtevant Air Separators cut separation costs of various materials by as much as 500%. In addition, they provide additional economies by reducing power costs up to 50%. That's why you'll find hundreds of these separators in all types of industries. Ruggedly constructed of quality materials, Sturtevant Air Separators keep on working day after day with minimum maintenance. They are available in many sizes from ¼ to 50 tons per hour output.

Investigate cost-cutting Sturtevant Air Separators for your plant. Write for catalog and information, today.

STURTEVANT MILL COMPANY

114 CLAYTON STREET, BOSTON 22, MASS.

Designers and Manufacturers of

CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS
MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

For more details circle NED-1515 on enclosed inquiry slip

It helps Gunners to "Bear On" Target

Added Evidence that

Everyone Can Count on

VEEDER-ROOT

This is a 360-degree bearing counter . . . equipped with high-speed Geneva transfer and large, readily readable figures . . . which speeds the work and heightens the accuracy of gunnery. And it might well be adapted to bring the same advantages to many other operations in defense work. Now if your imagination is stirred by this suggestion, then you can count on Veeder-Root to help you add up to something that will really *count to YOUR advantage.*

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONN.

For more details circle NED-1516 on enclosed inquiry slip

AS 103

DON'T SLIP UP ON Safety

USE FERA-MAT OR FERROX

Slipping accidents cut into production . . . and profits! Economical American Abrasive safety floorings and treads do a vital job at low cost. How much can you save with safety?

FREE FACT FOLDER on safety floorings gives you the answer. WRITE TODAY.

AMERICAN ABRASIVE Safety Floorings

AMERICAN ABRASIVE METALS CO., IRVINGTON 11, N. J.

For more details circle NED-1517 on enclosed inquiry slip

If you want REAL smoothness, greater load capacity, greater compactness or lighter weight in your drive, we suggest you look into Cone-Drive DOUBLE-enveloping gears and reducers—the gears with MORE TEETH IN CONTACT and MORE CONTACT PER TOOTH!

CONE-DRIVE GEARS
Division, Michigan Tool Company
7171 E. McNichols Road • Detroit 12, Michigan
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS

Ask for Bulletin #789-50

For more details circle NED-1518 on enclosed inquiry slip

MOTOR CONTROL CENTER for centralized control of two or more motors up to 200 hp, 600 v

Pre-engineered, factory wired and assembled, and using standard components and accessories, this motor control center is designed for use in power stations, metalworking and processing plants, and other industries. It provides simplified method of installing and servicing in a central location alternating current combination motor starters in NEMA sizes 1 through 5, as well as lighting panels and associated equipment for a group of motors. Center will withstand circuit stresses up to 25,000 amperes.

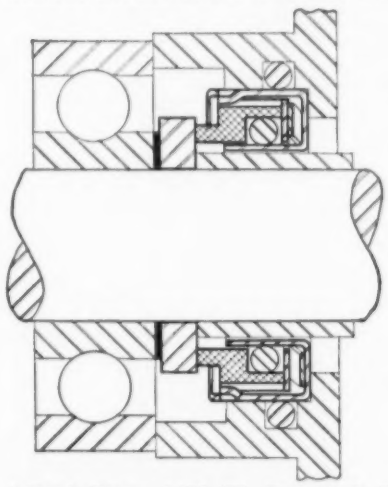
Sections measuring 20 in. deep, 20 in. wide and 90 in. high are joined together to form a free-standing dead-front NEMA I enclosed control assembly. Four-inch vertical trough with cable supports runs full length of each section to provide ample space for wiring. Metal barriers which separate starter units are removed easily to assure continuous wiring trough. Inspection and servicing are simplified because starter units are easily removed. Positioning guides insure correct alignment of starter to vertical bus. To protect personnel, full length metal barrier separates the bus compartment from starter units.

Control units can be installed from front or rear of section in variety of arrangements. Speed latches lock starter units in place. Made by **General Electric Co.**, Control Dept., Schenectady 5, N. Y.

For more details circle NED-1519 on enclosed inquiry slip

MECHANICAL SHAFT SEAL for high temperatures and speed

Materials incorporated in this mechanical shaft seal withstand exposure to practically all liquids and gases without deterioration. Meeting need for seal to be used with high pressures, temperatures and revolutions per minute, unit features hydraulic balance and low unit load pressures for long life. Seal can be varied to meet almost any operating condition or assembly problem. Applications include washing machines, water, oil and fuel pumps, hydraulic transmission, generators and gas blowers. Made by **Cartriseal Corp.**, 1455 W. Randolph St., Chicago 7, Ill.



For more details circle NED-1520 on enclosed inquiry slip

LOADED

JOHNSON Rotary Pressure JOINTS

Jam-packed with cost-cutting, efficiency-boosting characteristics, the Johnson Joint offers exciting possibilities you should know about. It's a packless, self-lubricating and self-adjusting way to get heating or cooling agents in or out of rotating machine parts; used on calenders, dryers, ironers, mills and similar machines. There are hundreds of design and production problems for which it holds the perfect answer.

Write for complete literature

The Johnson Corporation
812 Wood St., Three Rivers, Mich.

For more details circle NED-1521 on enclosed inquiry slip

WHEN THE AXLE COUNTS...

SPECIFY CARAVAN

United has engineered axle types and sizes to meet a wide range of axle requirements for air compressors, generators, electric welders, concrete mixers, military units, etc.

Sturdy, dependable United CARAVAN units utilize solid steel axle beams and are available as single-axle (2-wheel) assemblies as well as four-wheel running gear equipped with automotive-type steering. Straight or drop-axles can be supplied with load capacities from 1,000 to over 12,000 pounds.

Optional features include CARAVAN automatic surge-brake control, spring cushion hitch and the CARAVAN landing gear assembly for use with two-wheel units.

Write for illustrated catalog No. 101.

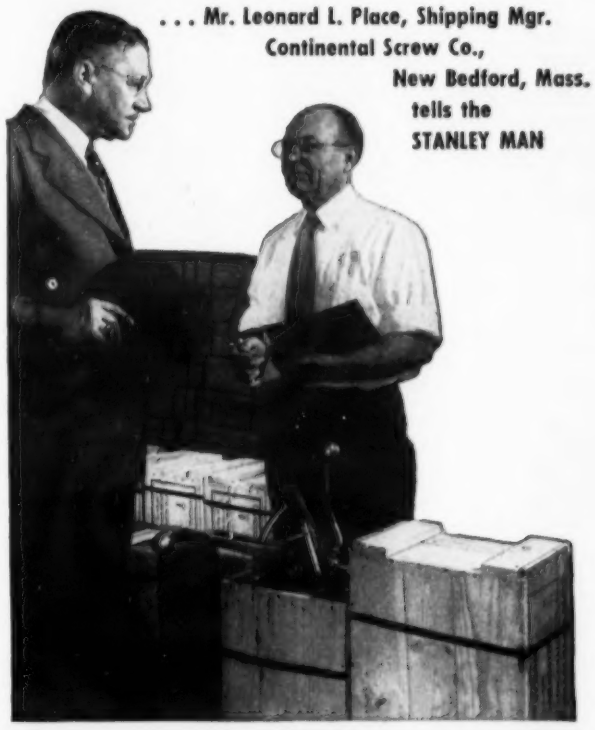
491-UM

THE UNITED MFG. CO.
210 Interstate St. • Bedford, Ohio

For more details circle NED-1522 on enclosed inquiry slip

"We've saved 30% in handling costs with the Stanley Steel Strapping System"

. . . Mr. Leonard L. Place, Shipping Mgr. Continental Screw Co., New Bedford, Mass. tells the STANLEY MAN



And this is but one of hundreds of success stories made possible with the Stanley Steel Strapping System. Just another example of how the Stanley Steel Strapping System and modern shipping methods can save man-hours—materials—money—shipping almost any product.

The complete System includes tools, reels, seals, strapping and accessories—everything needed for your application.

STEEL STRAPPING AND CAR BANDING SYSTEMS

STANLEY
Reg. U.S. Pat. Off.

Hardware • Tools • Electric Tools • Steel Strapping • Steel

Invite the Stanley Man to call

The Stanley Works, Steel Strapping Division, 209 Lake St., New Britain, Conn.
Branch Offices or Representatives in 32 principal cities.

Please ask your Representative to call and explain the advantages of the Stanley Steel Strapping System to me.

Name
Firm Name
Street
City and State

For more details circle NED-1523 on enclosed inquiry slip

Velvet-Smooth

Dual V-Belt Drive

You will like the smooth, vibrationless, dual V-belt drive—that protects the motor from shocks—eliminates gears and gearboxes, and oil and grease leakage that spoils clean wood—in this radically improved saw design. Here is a heavy duty saw for professional use.

Write for FREE Illustrated Literature

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

▲ For more details circle **NED-1524** on enclosed inquiry slip ▲

CHICAGO

Mounted WHEELS

FIRST AND FINEST

10 Big Advantages

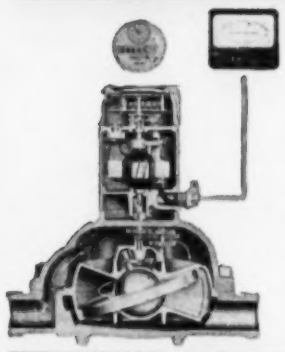
1. First in the Field — Unexcelled "Know-How"
2. Stronger Mandrels — Special Analysis Steel
3. Wheels Guaranteed to Remain on Mandrels
4. Constant Concentricity for Perfect Balance
5. Widest Variety of Sizes and Shapes
6. Strongest Construction for Longest Life
7. Greater Cutting Freedom — Faster Cutting Action
8. Better, Finer Finishes Positively Assured
9. Job-Engineered to Your Particular Requirements
10. Recommended by Skilled Mechanics and Craftsmen

CHICAGO WHEEL & MFG. CO.
Dept. NED, 1101 W. Monroe St.
Chicago 7, Illinois

Write For Free Catalog

▲ For more details circle **NED-1525** on enclosed inquiry slip ▲

Remote indication and control of liquid flow



Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks.

With the Hays VERITROL you simply set a knob at the rate of flow desired . . . then, the VERITROL *controls* the flow of liquid at that set-rate.

for corrosive liquids

Acetic Acid, Aluminum Potassium Sulphate, Ammonia, Calcium Compounds, Carbolic Acid, Formaldehyde, Fruit and Vegetable Juices, Hydrogen Peroxide, Phosphoric Acid, Potassium Hydroxide, Sodium Compounds, Sulphuric Acid (concentrated), Stearic Acid, and many others

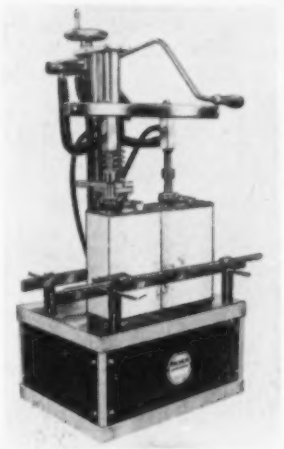
Send for a complete description of Hays Veriflow Meter and Veritrol. Bulletin 48-766

THE HAYS CORPORATION
MICHIGAN CITY 15, INDIANA

▲ For more details circle **NED-1526** on enclosed inquiry slip ▲

LIQUID FILLING MACHINE

vacuum and gravity types for filling large and small containers



Bench type liquid filling machine is offered in two types: one with pump and motor for vacuum operation; and one for filling by gravity only. When filling requirements dictate, combination unit for filling by either method is available. Vacuum liquid filler is capable of filling metal and glass containers from fractional ounces to quart sizes. It is made with three and four spouts and fills directly from drum, carboy or other type container resting on floor. Speed is in excess of 25 containers per minute.

Gravity model is for filling gallon cans with liquids that cannot be handled satisfactorily by vacuum method. Standard unit, with two spouts, fills from fractional-ounce containers to 1-gal cans. Speed is about 10 pints or 4 gal per minute. Both machines feature overflow jar, stainless steel parts in contact with liquids, neoprene tubing and ability to handle practically any still liquid. Made by **Packer Machinery Corp.**, 28-32 Irving Place, New York 3, N. Y.

▲ For more details circle **NED-1527** on enclosed inquiry slip ▲

PRODUCTION SANDER

7-in. model made for other uses

Sanding, wire brushing, grinding and polishing operations can be performed on metal, wood, tile, plastic, glass, concrete and other surfaces with No. 870 7-in. standard industrial sander. Weighing only 7½ lb, yet possessing power for continuous production use, sander can be used with laminated phenolic grinding wheels and disks. It features heat treated alloy steel gears, pinions and spindles; greased-sealed ball and needle bearings; easily accessible long life pigtail brushes; enclosed rocker type switch and no-load speed of 4500 rpm. Universal type motor is designed for 110-v direct or alternating current. Sander is supplied with 7-in. flexible rubber pad, 7-in. semirigid Co-Ro-Lite pad and three 7-in. assorted cloth-backed sanding disks. Made by **Millers Falls Co.**, DeWells St., Greenfield, Mass.

▲ For more details circle **NED-1528** on enclosed inquiry slip ▲

DO YOU KNOW? Red, white and blue stamps carrying the urgent plea "Keep the Scrap Coming Back for High Production in Steel Castings" are designed for use on correspondence and literature. Stamps are being made available by the Steel Founders' Society of America, 920 Midland Bldg., Cleveland 15, O.

▲ For more details circle **NED-1529** on enclosed inquiry slip ▲

BLACK DIAMOND
PRECISION DRILL GRINDER

EVERY MACHINE SHOP NEEDS A BLACK DIAMOND—FOR PRECISION SHARPENING OF ALL SMALL DRILLS—TO REDUCE DRILLING COSTS, DRILL BREAKAGE AND WORK REJECTS AND TO CONSERVE SKILLED LABOR

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are tremendously reduced.

Anyone can operate a Black Diamond, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, always ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ For more details circle **NED-1530** on enclosed inquiry slip ▲

THE RAYONIC® CATHODE RAY TUBES BY WATERMAN

3SP

Maximum 2nd anode voltage 2750 volts . . . Satisfactory operation can be achieved at 600 volts . . . Vertical deflection factor 52 to 70 volts DC per inch per kilovolt . . . Horizontal deflection factor 73 to 99 volts DC per inch per kilovolt . . . Grid cut-off voltage 2.8 to 6.7% of 2nd anode potential . . . Focusing voltage 16.5 to 31% of 2nd anode voltage . . . Heater 6.3V at .6 amp . . . Twelve pin small shell duodecal base . . . Tube can be mounted in any position . . . 3SP1 JAN approved.

Since the introduction of Waterman RAYONIC 3MP1 Tube for miniaturized Oscilloscopes, Waterman has developed a rectangular Tube for multi-trace oscilloscopy. Identified as the Waterman RAYONIC 3SP, it is available in P1, P2, P7 and P11 screen phosphors. The face of the Tube is 1½" x 3" and the over-all length is 9⅛". Its unique design permits two 3SP Tubes to occupy the same space as a single 3" round tube, a feature which is utilized in the S-15-A TWIN-TUBE POCKETSCOPE. On a standard 19" relay rack, it is possible to mount up to ten 3SP tubes with sufficient clearances for rack requirements. Thus 3SP RAYONIC tube is ideal for multitrace oscilloscope work.

WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PA.
CABLE ADDRESS: POKETSCOPE

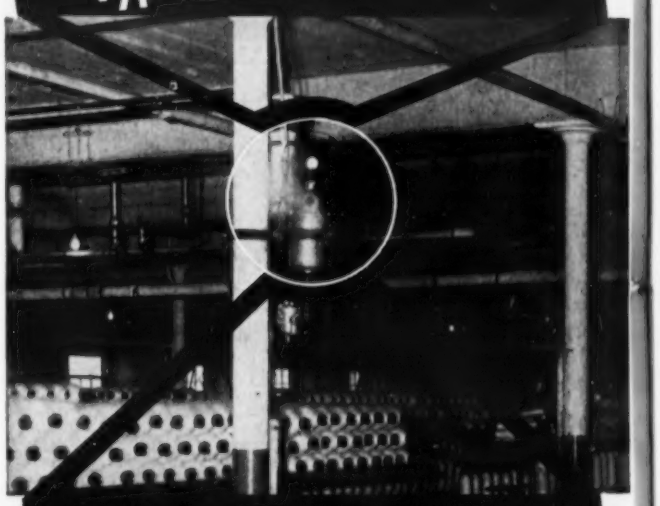
WATERMAN PRODUCTS INCLUDE:
3JP1 & 3JP7 JAN RAYONIC CR TUBES
3JP2 & 3JP11 RAYONIC CR TUBES
3MP7 & 3MP11 RAYONIC CR TUBES
3RP1, 2, 7, 11 RAYONIC CR TUBES

Also POCKETSCOPES, PULSESCOPES, RAKSCOPES and other equipment

WATERMAN PRODUCTS

▲ For more details circle **NED-1531** on enclosed inquiry slip ▲

Question: **What about Unit Type Steam Humidifiers?**

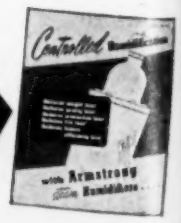


Answer: **Armstrong Unit Type Steam Humidifiers are ideal for overcoming wintertime dry air conditions for the following reasons:**

- **Fully Automatic.**
- **Accurate Control**—within 1%—2% relative humidity
- **Clean**—no residue in the air
- **Quiet**—acoustically designed
- **No cooling effect**—raise room temperature a degree or two
- **Economical to operate**—pennies per day per unit—½ to ¼ the price of water spray equipment
- **Low in first cost**—approximately $182 complete for a unit to handle up to 40,000 cu. ft.
- **Easy to install anywhere**—hooked up to existing steam and electrical systems much like unit heaters
- **Dependable**—quality materials and workmanship
- **Guaranteed**—complete satisfaction or your money back. Write today.

ARMSTRONG MACHINE WORKS
819 Maple Street, Three Rivers, Mich.

For Full Details Send for BULLETIN 1773



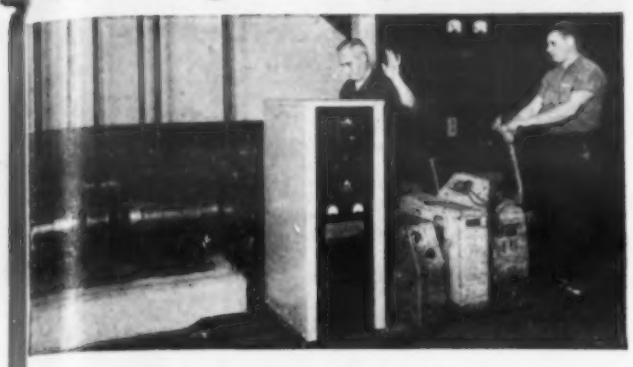
Operating principles, capacities, sizes, prices, hookups, selection data and other useful information — all included in Bulletin 1773. Send for your copy today.

ARMSTRONG *Steam* HUMIDIFIERS

BUILT BY THE MAKERS OF ARMSTRONG STEAM TRAPS

▲ For more details circle **NED-1532** on enclosed inquiry slip ▲

Poor Voltage Slowing Production?



...install General Electric Inductrols
(dry-type induction voltage regulators)

When voltage sags, motor performance and lamp brilliance suffer. Efficiency and output drop sharply. That's why it pays to keep voltage up with General Electric's Inductrols. These new dry-type regulators *automatically* maintain correct voltage on your electric equipment—assure peak operating efficiency.

G-E inductrols do not require expensive fireproof vaults. All-steel cabinets attractively styled, protect personnel by completely enclosing all live parts.

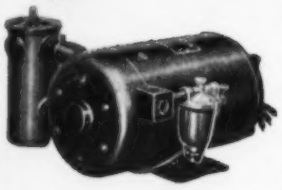
For information on how, when and where to apply Inductrols contact your G-E sales representative or authorized dealer. Write for Bulletins GEC-712 and GEC-795 *General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC 404-91

For more details circle NED-1533 on enclosed inquiry slip

no needless maintenance; no waste space because NO GEARS, NO BELTS, and NO EXTENDED DRIVES bother you in this compact

MOTOAIR* PUMP
for VACUUM or PRESSURE



Integrally a part of its own motor, and but a few inches longer. Visible lubrication with no "discharge oil", this rotary type pump is available in four sizes with built-in exhaust air-filter. Operates with equal efficiency when ceiling, wall or normally mounted, and rotary blades compensate for their own wear.

*Reg. U. S. Pat. Off. 817

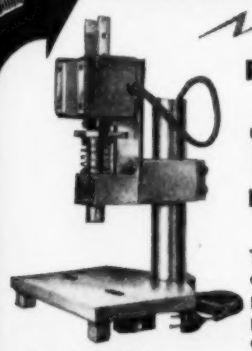
Designed for packaging, printing and paper handling machinery, laboratory use, tank evacuation, vacuum frames, etc. **Ask for Catalog Details!**

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

For more details circle NED-1534 on enclosed inquiry slip

WIDELY USED TO

LIGHTNING-FAST ELECTROPUNCH



PRODUCES UP TO **10,000** PIECES PER HR.

This versatile low cost electric impact hammer produces up to 10,000 pieces per hour using automatic switching — as high as 5,000 pieces per hour with hand or foot switching. Ideal for steel stamping, inspection or identification marks on small defense parts.

ELECTROPUNCH is portable — plugs into any 115 V A. C. outlet. Lightest model (illustrated) sells for only $90.75.

ELECTROPUNCH *quickly* pays for itself. Investigate its possible applications in your plant now!

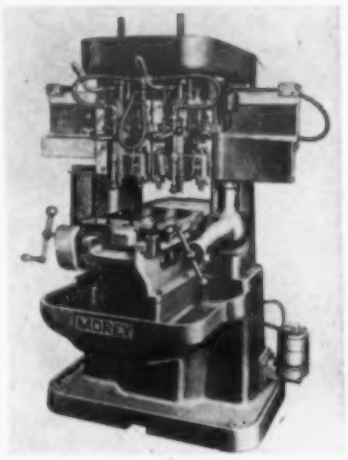
Write for descriptive folder.

BLACK & WEBSTER, INC.
Dept. 1, 445 Watertown Street, Newton 58, Mass.
Phone: Frank Webster — Bigelow 4-6370

BEND PUNCH DIMPLE

For more details circle NED-1535 on enclosed inquiry slip

PROFILER & MILLING MACHINE
many refinements on improved model



Refinements on redesigned No. 12M high speed vertical profiler and milling machine include improved spindle bearings and splined shafts in place of keyways. Others are hardened and ground steel ways on cross-slide, while travel-head is now mounted on rollers which ride on ball bearings to minimize friction and assure quick easy movement. Gear train has been simplified and control handle relocated. Standard equipment now includes slotted table, table and cross-slide stops, drawbar and collet. Profiler, designed for duplication of small parts requiring accurate interchangeability, is available in double spindle type. It reproduces wide range of parts from flat master. Made by **Morey Machinery Co.**, Dept. NED, 410 Broome St., New York 13, N. Y.

For more details circle NED-1536 on enclosed inquiry slip

MONOCHROMATIC LIGHT
gives finished parts rapid check for dimensional accuracy

Possessing ten times the capacity of the previous model, improved Monolight monochromatic light provides means for quickly checking dimensional accuracy of finished parts. New model (B) has design features of superseded model (A), including compact rectangular shape, built-in power unit and adjustable helium light which can be raised, lowered and turned 360 degrees. New unit has cast aluminum body, 5 x 5½-in. high intensity helium tube light source which gives 53 foot-candle power on testing stage and storage space for six 2-in. or three 3 or 4-in. optical flats.

Standard 6⅛ x 4⅛-in. phenolic plate stage can be substituted for granite surface plate. Power supply is 7500-v transformer operating on 110-120 v, 60 cycle ac. Helium light source provides accurate interference bands at 0.0000116-in. intervals. When used with accurate optical flats, it will measure size, flatness and parallelism to within a few millionths of an inch. Larger areas or greater work heights can be inspected by turning light source 180 degrees. Accessories available include gage blocks and optical flats. Made by **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

For more details circle NED-1537 on enclosed inquiry slip

More Production for Your Glove Dollars

R-15 Extra Duty, red neoprene coated fabric, curved fingers, non-slip grip, preflex palm and inserted thumb design. Knit wrist.

PIONEER **Stanzoils**®

It pays you to buy gloves that permit fast and easy work, with protection. No one or two gloves fit all jobs. There's more production in the right glove for each job. PIONEER's new Stanzoil catalog shows you how to buy. *Unbiased advice—Stanzoils include all kinds of liquidtight gloves:* all-neoprene, neoprene and vinyl-coated. 32 styles, weights, sizes, colors. Get dexterity plus utmost protection. Increase production, avoid work stoppage, satisfy workers—write for your Stanzoil catalog today!

Industrial Products Division

The PIONEER Rubber Company
634 Tiffin Road • Willard, Ohio

STANZOIL PIONEER

OVER *30 Years* OF QUALITY GLOVE MAKING

For more details circle NED-1538 on enclosed inquiry slip

BOLT THREADING MACHINE

Oster No. 902 "Rapiduction" machine is equipped with lead screw synchronized with semi-automatic revolving die-head to trip automatically at finish of the thread by means of electric solenoids. This mechanism and the open-type, three-point contact vise reduce operator fatigue, increase production and assure precision results on a wide variety of threading work.

Standard range for bolts, N.C. ½" to 2". 12 pitch or finer, ½" to 2¼". Pipe or nipple range ¼" to 2".

For complete details, write . . .

OSTER

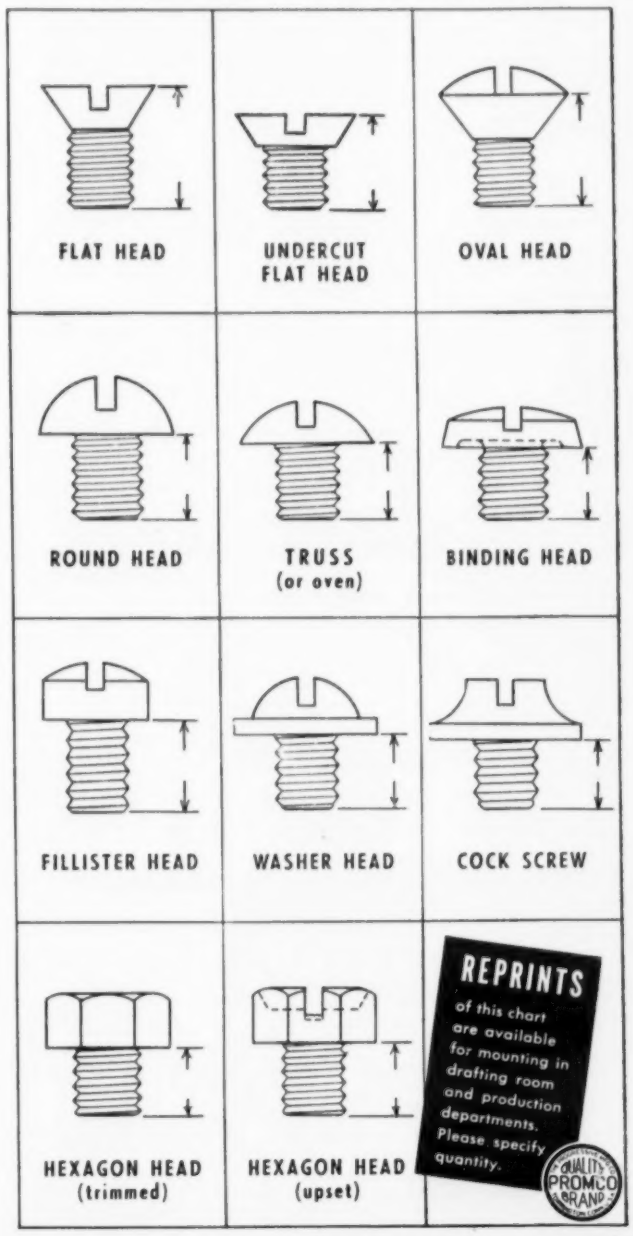
THE OSTER MFG. CO.
2066 East 61st Street
Cleveland 3, Ohio, U.S.A.

For more details circle NED-1539 on enclosed inquiry slip

SAVE DRAFTING TIME

Right Way to MEASURE MACHINE SCREWS

By dimensioning and naming machine screws as indicated, you avoid misunderstanding, cut down on drawing changes and save time in purchasing.



REPRINTS of this chart are available for mounting in drafting room and production departments. Please specify quantity.

QUALITY PROMCO BRAND

MACHINE SCREWS AND SPECIAL FASTENERS ARE OUR BUSINESS

WRITE FOR OUR CATALOG

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

For more details circle NED-1540 on enclosed inquiry slip

A SHORT STORY ON
ROTO-FINISH

PROCESSES AND EQUIPMENT

For Your Deburring, Descaling and Finishing Operations

Here's what Roto-Finish gives you—

1. Mechanical: Eliminates hand treatment, saving valuable man hours.
2. Control: Affords absolute uniformity in quantity lots.
3. Precision: Keeps tolerances on precision parts exact.
4. Production: Produces a finish mechanically unsurpassed by any other method.
5. Low cost: Requires but a minimum of maintenance.

See your nearest Stevens Representative for complete details, or write us direct.

Distributed by

FREDERIC B. STEVENS INCORPORATED
DETROIT 16, MICH.
BUFFALO • CHICAGO • CLEVELAND • INDIANAPOLIS • NEW HAVEN Representatives in Principal Cities
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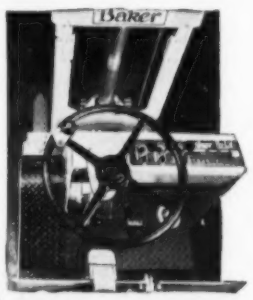
For more details circle NED-1542 on enclosed inquiry slip

If you can drive an auto—you can drive the NEW BAKER FORK TRUCKS!

Simplicity of operation means no training period for new drivers. Ease of handling means more work per day. Increased visibility means greater safety and less damage to material handled. Happier operators mean improved employee relations.

- Easier Steering
- Greater Comfort and Operating Convenience
- Greater Visibility, Less Operator Fatigue, More Efficient Operation, Greater Safety
- Simple to Operate
- Easy to Service and Maintain



The New BAKER Fork Trucks can be serviced in a fraction of the time required for trucks of less advanced design. Compare the following times with the experience of your maintenance department:
Remove Power Axle . . 60 minutes
Remove Trailing Axle . 20 minutes
Reline Brakes . . . . . 30 minutes

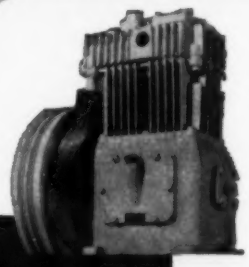
Yours for the Asking!

16-page picture-story manual "CARE and MAINTENANCE OF INDUSTRIAL TRUCKS." Write for your copy today.

BAKER INDUSTRIAL TRUCK DIVISION of The Baker-Raulang Company
1245 West 80th Street, Cleveland 2, Ohio
In Canada: Railway and Power Engineering Corp., Ltd.

Baker INDUSTRIAL TRUCKS

For more details circle NED-1543 on enclosed inquiry slip



How to use
COMPRESSED AIR

Compressed air provided by the correct type and size Quincy Compressor can be the solution to many production and manufacturing problems in your plant. Quincy Compressors provide air for blowing, spraying, starting, lifting, braking, driving, chucking, filling, and many more operations. Sizes range from 1 to 90 c.f.m. Write today for details on the complete line of Quincy Air Compressors. Quincy Compressor Co., Dept. NE23, Quincy, Illinois.

Quincy COMPRESSORS

QUINCY COMPRESSOR CO.
Quincy, Illinois

Branch Offices: New York • Philadelphia • Chicago
St. Louis • Dallas • San Francisco

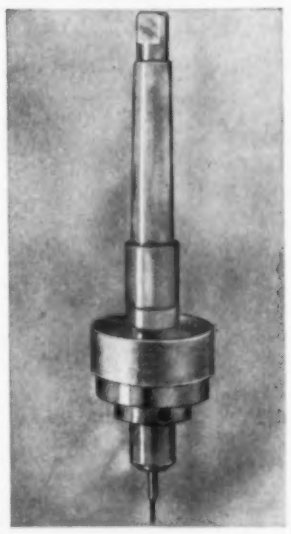
For more details circle NED-1544 on enclosed inquiry slip

HEAT-RESISTANT GLOVE
asbestos lining repels radiant heat

Designed especially to protect hands of workers exposed to radiant heat, No. A-3101 Plyglov is durable asbestos aluminum-lined reversible mitt. Sheet of aluminum-coated fabric is employed between two layers of heavy asbestos to reflect up to 90 per cent of radiated heat. Glove is jersey lined for comfort. Tests indicate that objects at temperatures to 1200° F can be handled safely. Asbestos surface is treated to resist abrasion and afford long life. Glove is particularly suited for handling hot castings, molds, hot glassware and similar objects. Made by **Milburn Co.**, Dept. N, 3245 E. Woodbridge St., Detroit 7, Mich.

For more details circle NED-1545 on enclosed inquiry slip

TAPPING HEAD
for 0-80 to 4-40 holes in steel mounts in standard drill press



Sensitive feel in tapping 0-80 to 4-40 holes in steel or other materials at high speed is provided by this tapping head for mounting in spindle of standard drill press. As provision for vertical travel of tap is built into tapping head itself, neither control lever on drill press nor vertical travel of drill press spindle is used. Tapping operation control is through knurled collar above tap. Light downward pressure on collar drives tap into work and light upward pressure reverses it. During tapping operation, tap can be cleared as necessary by rapid reverse control. When tapping 0-80 or 1-72 holes, a special factory-adjusted clutch prevents overloading the tap. For larger holes to 4-40, no special protection is required and clutch is locked. Made by **Winslow Product Engineering Corp.**, 5422 Jillson St., Los Angeles 22, Calif.

For more details circle NED-1546 on enclosed inquiry slip

DO YOU KNOW? Personnel-labor relations is new course offered for home study. Included are lessons in leadership and the workers, leadership and organized labor, leadership and the organization, employment practices, collective bargaining, job analysis, job evaluation and merit rating, incentive wage systems, report writing and labor relations. A total of 18 lessons require approximately 360 hours of study. For full information, write International Correspondence Schools, Dept. NED, Scranton, Pa.

For more details circle NED-1547 on enclosed inquiry slip

SURE CURE FOR HEADACHES

Forget your pump worries. You can always count on Tuthill's positive displacement internal gear rotary pumps to meet your small pump requirements. Tuthill pumps are known for their dependability, economy and long life as proved by hundreds of thousands in the field. Make Tuthill your source of supply for these outstanding pumps.

Check your pump needs and write for details today

COOLANT PUMPS—for handling cooling oils on machinery. Complete assemblies and special models designed to be incorporated directly into the machinery. Automatic reversing and pressure releasing types. Capacities up to 50 gpm.

LUBRICATING PUMPS—including complete assemblies and special models for incorporating directly into the design of the machine. Automatic reversing types. Capacities up to 50 gpm.

HYDRAULIC PUMPS—for hydraulic operation on machine tools, engines, and other mechanisms.

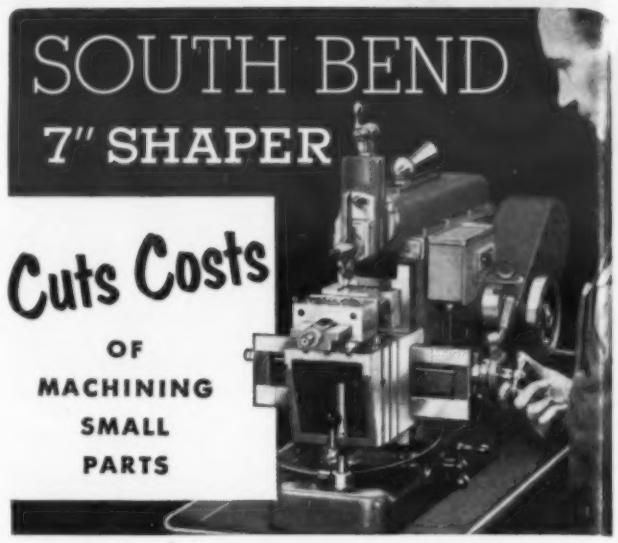
LIQUID TRANSFER PUMPS—for heavy and light oil and non-corrosive liquids. Capacities up to 200 gpm.

FUEL OIL PUMPS—for supply or booster purposes. Capacities up to 50 gpm.

TUTHILL PUMP COMPANY
939 East 95th Street, Chicago 19, Illinois

For more details circle NED-1548 on enclosed inquiry slip

SOUTH BEND 7" SHAPER



Cuts Costs OF MACHINING SMALL PARTS

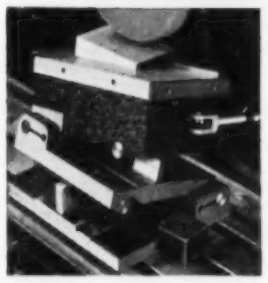
It's fast—accurate—easy to operate. The South Bend 7" Precision Shaper can consistently give you low machining costs on small parts. Designed to handle a wide variety of work in this class, it will enable you to release larger shapers for heavier work, save on machine investment and economize on both power and upkeep. Find out how this versatile shaper can give you better service on production, toolroom or maintenance machining.

Also write for catalogs on South Bend Lathes (9" to 16-24" swings) 14" Drill Presses and Lathe Attachments.

SOUTH BEND LATHE
SOUTH BEND 22, INDIANA
Building Better Tools Since 1906

For more details circle NED-1549 on enclosed inquiry slip

ANGULAR SET-UPS
to gauge-block accuracy
IN A FEW MOMENTS



SEND FOR FREE CATALOG TODAY

the Magna-Sine

Any angular set-up, single or compound, takes only the time to look up the angle in the Robbins Table of Constants and to insert the indicated gauge blocks between the Magna-Sine plates. It's fast—it's positive, to gauge-block accuracy. Work is held by magnetic attraction. In two models and two sizes; also in non-magnetic models for inspection work.

OMER E. Robbins COMPANY
Manufacturers of the MAGNA-SINE and Other Precision Tools
5722 TWELFTH ST. • DETROIT 8, MICH.

For more details circle NED-1550 on enclosed inquiry slip

HOW TO PUT THE "Freeze" on Pressure Reducing Problems...
USE MASONEILAN Regulators

Production and maintenance men can count on Masoneilan Pressure Reducing Valves to give accurate control of steam, water or air. Constructed to high quality standard, they give long-lived service...require minimum of maintenance because they are *built up to the job* not down to price.

No. 33 for steam or air service — sizes from ⅛" to ¾". Reduced pressure ranges 2-20; 20-40; 40-100 psi. Maximum working pressure 200 lbs.

No. 227 for water service — sizes ¼" to 2". Reduced pressure ranges 10 to 60 psi. Maximum working pressure 150 psi. Also available for air service from ¼" to 1".

Your local Mason-Neilan Industrial Distributor is Ready to serve you from stock; or Write —

Mason-Neilan Regulator Company
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

For more details circle NED-1551 on enclosed inquiry slip

MORE STORAGE SPACE AT LESS COST!
with The PALTIER System

Utilize more of your available storage space without adding to your floor area.

The PALTIER System is safe, sturdy, and with its
Flexibility—
Efficiency—
Economy—
will do your job
BETTER
and at
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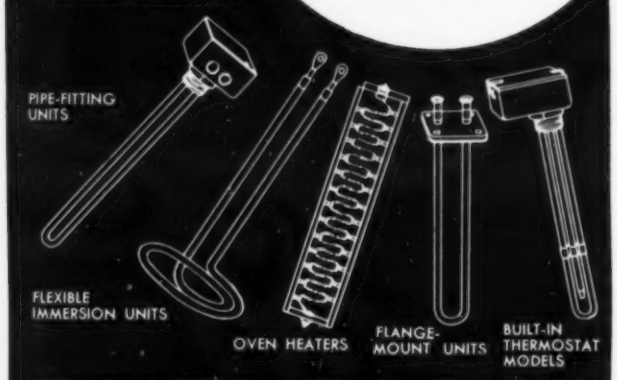
1701 KENTUCKY STREET • MICHIGAN CITY, INDIANA
DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-1552 on enclosed inquiry slip

THERMALINK Electric HEATING ELEMENTS
OVER 600 STANDARD MODELS & TYPES

IMPROVE YOUR ELECTRICALLY HEATED PRODUCTS AND EQUIPMENT WITH THERMALINK ELEMENTS



SPECIALISTS IN CORROSION-RESISTANT IMMERSION HEATERS
Write Dept. N for Literature
ELECTRO-THERM INC.
8024 GEORGIA AVE., SILVER SPRING, MD.

For more details circle NED-1553 on enclosed inquiry slip

INSTANT current measurements FOR BOTH AC and DC

WITH A COLUMBIA
TONG TEST AMMETER

There is no other instrument like a Tong Test—it measures both A.C. and D.C. Readings are made instantly and accurately.

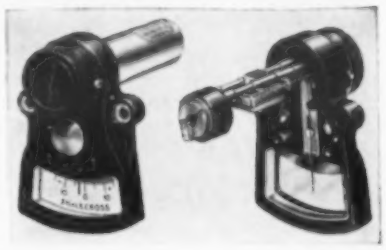
These outstanding features are yours when you use a Tong Test Ammeter:
- No breaking of circuit
- Operated with one hand
- Safe and convenient to operate
- Light weight—low price
- Scale ranges up to 1000 Amperes
- Voltage attachment available
- Five types to accommodate cables up to 3⅞", bus bars up to 4½" x ½"

Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

For more details circle NED-1554 on enclosed inquiry slip

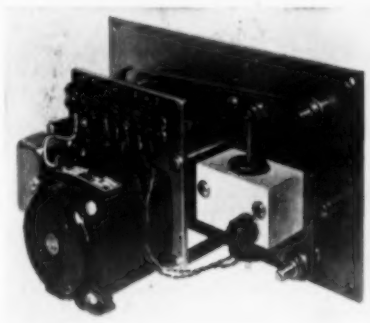
GALVANOMETERS
have rod supports for panel mounting



Simplified construction, light weight and low cost are features of improve lined of type 1951 direct current galvanometers. Coil and its mechanism are mounted on sturdy rod supports and protected by removable aluminum cover of 23/32-in. diameter. Panel mounting holes are standard, and instrument is suitable as replacement for most galvanometer systems in common use. Four available types have sensitivities of 4, 2, 1 and 0.5 microamperes per millimeter division. Taut-suspension moving coil principle is used, with pointer reading on scale calibrated in 15 divisions of 1 mm each either side of center. Made by **Shallcross Mfg. Co.**, 10-F Jackson Ave., Collingdale, Pa.

For more details circle NED-1555 on enclosed inquiry slip

ELECTRONIC SERVO MECHANISM
in right or left hand assemblies positions pens, cams and pointers



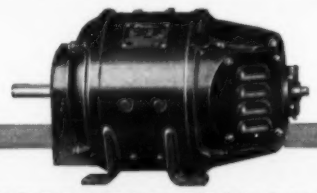
Dial pointers, recorders pens, mechanical counters, printing devices, switch cams, pulley wheels and gear trains are among many instruments that can be remotely positioned with Atcotran electronic servo mechanism. Servo employs electrical null-balance differential transformer measuring system actuated by two-phase low inertia motor. Operation is unaffected by line voltage variations of plus or minus 10 per cent. Full range rotation in 2, 4 or 10 seconds; instantaneous output shaft movement per change; and dead beat noncyclic response are among features.

Servo has about 5000 motor driven output shaft positions with accuracy of plus or minus 0.2-per cent full range which is 333⅓ degrees of shaft rotation. Output shaft develops 15 oz-in. force with 2-second response, 30 oz-in. with 4-second response and 60 oz-in. with 10-second response. Servos are available in right and left hand assemblies. Made by **Automatic Temperature Control Co.**, 5206 Pulaski Ave., Philadelphia 44, Pa.

For more details circle NED-1556 on enclosed inquiry slip

DO YOU KNOW? Towmotor's popular "Plant Safety Kit" (*See NED, Feb.* 1951) containing literature emphasizing safety in the use of materials handling equipment has been augmented by the addition of four new safety cartoons designed for bulletin boards in plants. The original kit consisted of traffic markers, safety instructions for industrial truck operators and humorous posters. Material is available free from Towmotor Corp., 1219 E. 152nd St., Cleveland 10, O.

For more details circle NED-1557 on enclosed inquiry slip



ALL PEERLESS MOTORS ARE "Peerless Registered"

MORE than 90% of all Peerless Motors are custom manufactured to meet the specific operating requirements of the equipment with which they are to be used. So we "Peerless Register" every motor before shipment. The words "Peerless Registered" are a trademark, recorded in the U.S. Patent office. Only Peerless Motors can bear this phrase, and only Peerless Motors offer you this protection. This registration record is assurance to both you and your customer that the Peerless Motor has been properly designed for your equipment so as to give best possible performance and long, satisfactory service. And the registration record makes possible the quick identification of any Peerless Motor—anywhere.

THE PEERLESS ELECTRIC CO., WARREN, OHIO
Manufacturers of Quality Motors Since 1893
Single Phase • Polyphase • Direct Current • ¼ to 15 H.P.

Peerless Electric MOTORS·FANS·BLOWERS

For more details circle NED-1558 on enclosed inquiry slip

You can NOW speed deburring, chamfering, pointing, facing, center-drilling, and reaming operations with

PINES END-FINISHING MACHINES

Handle broad range of rod, tube, and pipe end-finishing work with speed and precision. Exclusive chuck feature clamps and feeds work to cutters in one motion. Operator always has one hand free for stock handling. Designed with quick interchangeable tool holders and chuck inserts, 8-speed sheave — 760 to 3920 r.p.m., hardened and ground spindle, grease-sealed precision bearings. Automatic swing-type stock stop assures fast, accurate positioning. Entire unit is portable, takes up small space, handles stock diameters up to 2". Max. feed is 1¼". Larger sizes up to 5" capacity available. **Typical production:** 800 tube ends per hour.

(Above) Pines 2" High Production End-Finishing Machine equipped with foot-controlled air operating cylinder. Clamp, feed, and return cycle is automatic. Operator has both hands free for stock handling. Supplied similar to hand-operated unit.

Write for Free Bulletin
Write today for free bulletin and learn how these machines are built to save time on a wide range of work.

PINES ENGINEERING CO., Inc.
Specialists in Tube Fabricating Equipment
641 WALNUT • AURORA, ILLINOIS

For more details circle NED-1559 on enclosed inquiry slip

Fine machines begin with FINE BEARINGS

For more than four decades designers of fine machines have found that Ahlberg Precisioneered bearings offer outstanding opportunities for improving design, increasing efficiency, reducing maintenance and cutting cost. Ahlberg Bearings can improve your products' future, too. Let's talk it over. Ahlberg Bearing Company, 3025 W. 47th St., Chicago 32, Illinois.

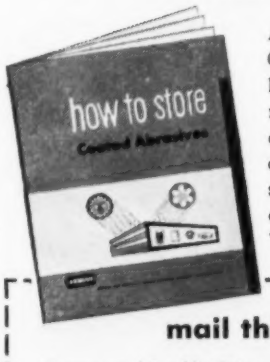
AHLBERG BALL BEARINGS
ENGINEERED AND BUILT FOR THE WORLD'S FINEST EQUIPMENT

AUTOMOTIVE...INDUSTRIAL...AIRCRAFT...MARINE...ARMAMENT

For more details circle NED-1560 on enclosed inquiry slip

Stop wasting money!

Protect your investment in coated abrasives



A new booklet from Armour's Coated Abrasives Division tells you how to stop losses—in time and money—from improperly stored coated abrasives. Clogging, filling, cracking, loss of grains—these are some of the things proper storage can prevent. Send for free copy of "How to Store Coated Abrasives."

mail this coupon today

Please send booklet "How to Store Coated Abrasives."
Name _____
Company _____
Address _____
City _____ Zone _____ State _____

ARMOUR Coated Abrasives
Armour and Company • North Benton Road • Alliance, Ohio

For more details circle NED-1561 on enclosed inquiry slip

You'll find American STOCK Gears meet every requirement for high quality, accurate tooth contour, smooth, quiet performance and long life.

Complete line includes:
Spur Gears . . . Racks . . . Change Gears . . . Internal Gears . . . Miter Gears . . . Bevel Gears . . . Ratchets and Pawls . . . Spiral Gears . . . Worms and Worm Wheels.

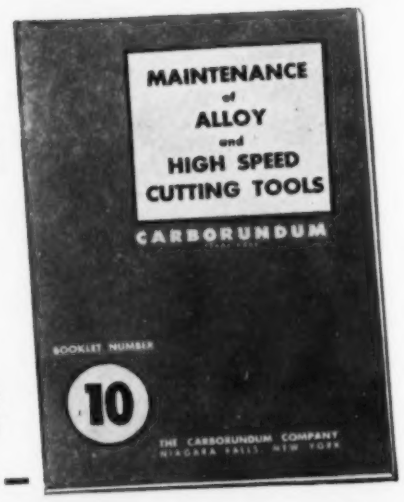
Write us for name of distributor nearest you . . . Also request a free copy of Specification Catalog.

asg AMERICAN STOCK GEAR division
PERFECTION GEAR COMPANY • HARVEY, ILLINOIS

For more details circle NED-1562 on enclosed inquiry slip

IT'S FREE

This new booklet tells HOW TO GET LONGER TOOL-LIFE



72 FACT-PACKED PAGES

- Lathe and Planer Tool Grinding
- Cutters and Reamers
  - Grinding Methods
  - Proper Clearance Angles
- Typical Tool Sharpening Setups
  - Spiral and Side Milling Cutters
  - Large Face Mills
  - Angular Cutters
  - Formed Cutters—narrow and wide face
  - Straight-toothed Hobs
- Reamers
- Thread Chasers
- Drills, Taps, Broaches
- Surface Grinding
- Cylindrical Grinding
- Internal Grinding
- Lapping in the Tool Room
- Grinding Wheel Grading Recommendations

New men to train? Defense contracts? New methods?

BOOKLET NO. 10, newly revised, is crammed full of factual, easy-to-follow instructions for sharpening every kind of cutting tool. In addition to the subjects listed in the box, there are tables and diagrams on a wide variety of typical tools, showing the proper rake, clearance and cutting angle of each. Pocket-size, handy to use, clearly and profusely illustrated, a treasure-house of valuable information. Send for your copy today.

Only CARBORUNDUM
TRADE MARK
offers ALL abrasive products ...to give you the proper ONE

"Carborundum" is a registered trademark which indicates manufacture by The Carborundum Company, Niagara Falls, New York

81-95

For more details circle NED-1563 on enclosed inquiry slip

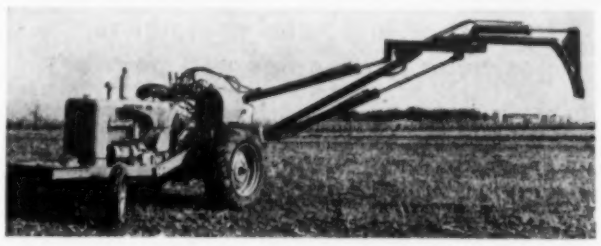
FEED-THROUGH CAPACITOR
is resin-sealed against humidity

Ferrule-type 503C feed-through ceramic capacitor for filtering leads passing through a chassis finds practical application in design and production of TV and electronic equipment. Ceramic disk element is resin-sealed in recessed cup at top of metal ferrule for protection against humidity. Through-lead passes through hole in center of this dielectric disk. Thus, there is equal radial distribution to grounded outer shell of all high frequencies being bypassed. Rated at 500 v dc, capacitance values of unit range up to 100 mmf. Made by **Sprague Electric Co.**, Dept. D, North Adams, Mass.

For more details circle NED-1564 on enclosed inquiry slip

TRACTOR MOUNTED DIGGER
hydraulic attachment has 16-ft reach

Designed for mounting on model SD-3 Sheppard diesel tractor, Hopto digger is equipped with hydraulically actuated rake attachment. Attachment is operated from



tractor power take-off and is completely hydraulic. Total weight is 6700 lb. Digger has swing of 180 degrees, reach of 16 ft, digging depth of 9 ft and height with boom extended of 19 ft. Vickers and Blackhawk hydraulic system operates at 1000 psi. Lifting capacity of digger is 2000 lb, but heavier loads can be handled with stabilizers. Made by **Badger Machine Co.**, Desk 41, Winona, Minn.

For more details circle NED-1565 on enclosed inquiry slip

METER SHUNT
allows checking micromicroamperes

Available in seven standard resistance values, model 2001 shunt converts model 200 vacuum tube Electrometer for use as micromicroammeter. Range is 0.000001 to 0.0000000000001 - amperes. It clips easily over guard ring of meter and permits accurate measurement of minute currents such as in insulation leakage, ion chamber and photoelectric cell tests. Capacitance also can be measured by using meter, shunt and stop watch. Meter and shunt are made by **Keithley Instruments**, 3870 Carnegie Ave., Cleveland 15, O.

For more details circle NED-1566 on enclosed inquiry slip

CAN YOU AFFORD NOT TO GIVE YOUR WORKERS PROPER *Seating?*

A tired worker costs MUCH more than a GOOD CHAIR

***Royal's* 515 STOOLS WILL HELP KEEP YOUR WORKERS AT PEAK EFFICIENCY...**

Resulting in More Work Produced per Man Hour and Lower Actual Costs per Chair.

- STURDY MASONITE INSERT IMBEDDED IN SEAT PAN.
- LEG EXTENSION FOR EASY HEIGHT ADJUSTMENT.
- ADJUSTABLE BACKREST.
- OVEN BAKED GREY ENAMEL FINISH.

60 DAY Free TRIAL
examine it... test it... use it without obligation

10 YEAR Free MAINTENANCE POLICY

ROYAL METAL MFG. CO.
175 NORTH MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

For more details circle NED-1567 on enclosed inquiry slip

For more details circle NED-1568 on enclosed inquiry slip

Tiny parts for the DC-6 get THOROUGH check-up with FLASH-O-LENS

Small parts for the hydraulic system of the famous Douglas DC-6 are inspected for symmetry with FLASH-O-LENS — the handy device that *lights* the work and *magnifies* it.

It will pay *you* to put FLASH-O-LENS to work on your inspection jobs. Built-in bulb throws light *only* on field of vision — *not* in worker's eyes. Accurately ground lens gives sharply detailed enlargement.

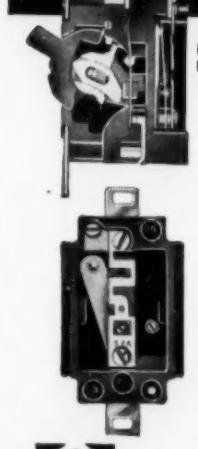
Write for free descriptive literature on battery-operated and plug-in types.

E. W. PIKE & COMPANY
492 NORTH AVE. ELIZABETH, N. J.

For more details circle NED-1569 on enclosed inquiry slip

the Switch that **Has What It Takes-**
for SMALL MOTORS 1 h.p. or less

SHAWMUT TYPE B MOTOR OVERLOAD SWITCH



(Rating: 1 h.p. max. @ 115v or 230v. Non-inductive load: 15A-130v or 10A-230v)

SHAWMUT TYPE B has an *exclusive*, easy-operating, unique, trip-free mechanism. The thousands of SHAWMUT TYPE B's now in use prove that it "has what it takes!"

THREE TYPE B TYPES

1. Single Pole, solid neutral — for 2-wire, single conductor grounded circuits.
2. Single Pole — for 2-wire, single phase, one conductor, grounded circuits.
3. Double Pole — for 2-wire, single phase systems with conductors ungrounded, or 3-wire, one phase, grounded-neutral.

Heavy steel enclosure boxes. Easy to install, simple to maintain. Box or open mounting.

POSITIVE OVERLOAD PROTECTION

Silver molybdenum contacts. Interchangeable heaters. 24 different Ampere ratings legibly stamped for identification. Calibrated for each rating and die-cut for uniformity. Quality construction throughout.

SEND FOR BULLETIN #512 AT ONCE

THE CHASE-SHAWMUT CO.
382 MERRIMAC STREET • NEWBURYPORT, MASSACHUSETTS

For more details circle NED-1570 on enclosed inquiry slip

New! Farquhar SUPER-ACE CONVEYOR

slashes coal handling costs!

Here's a brand *new* Farquhar Portable Conveyor with *exclusive* features *especially designed to save you time and money* in your coal handling operation. Heavy plate construction, channel iron wheel truck, closer tolerances—all give you greater strength with less weight! Bolted construction makes for easy repairs! Top-quality belting, improved pulley construction, deeper, wider return dust pan assures longer belt life! Moving parts feature ball bearings! Either chain and sprocket or V-belt drive!

Farquhar CONVEYORS SAVE YOU MONEY

WRITE NOW for complete information on this new time and money-saving Farquhar Super Ace Portable Coal Conveyor!

A. B. FARQUHAR CO., Conveyor Div., Dept. F-04 142 N. Duke St., York, Pa., or 618 W. Elm St., Chicago 10, Ill.

HYDRAULIC PRESSES • FARM EQUIPMENT • FOOD PROCESSING AND SPECIAL MACHINERY

For more details circle **NED-1571** on enclosed inquiry slip

A simple change in our MIKRO-PULVERIZER has produced outstanding results, especially in the handling of heat-sensitive materials.

Altho this project is still in the development stage, we know that on some materials it means . . .

25% reduction in temperature rise
25% reduction in H.P. consumption
OR—in lieu of H.P. savings—
a 30-50% increase in production

Right now, you can help yourself by letting us try this new grinding method on *your own material* in the MIKRO Laboratory. Test will cost you nothing, but it may solve *your* problem.

INVESTIGATE this opportunity today.

PULVERIZING MACHINERY COMPANY
28 Chatham Road **Summit, New Jersey**

1391

PRESERVE OUR HERITAGE: FAITH, FREEDOM AND INCENTIVE

MIKRO-PULVERIZER FINE / MIKRO-ATOMIZER ULTRA FINE
REG. U.S. PAT. OFF.
Also Makers of the MIKRO-COLLECTOR

For more details circle **NED-1572** on enclosed inquiry slip

IT'S TIME TO INVESTIGATE if you are not using the PROVEN Dy-Namic Balancing technique in your plant! Improves product performance by reducing noise, vibration and friction —*fast...accurate...economical!* FREE Dy-Namic Balancing Manual brings you latest facts!

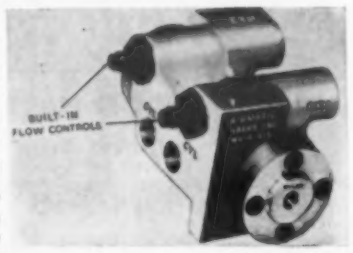
Bear Mfg. Co., Dept. N-5, Rock Island, Ill.

4083

"BEAR"
STATIC AND *DY-NAMIC BALANCING* MACHINES

For more details circle **NED-1573** on enclosed inquiry slip

AIR CONTROL VALVE
for air, oil, water use to 150 psi



Usable with pilot valves to provide automatic and semiautomatic operation, sequence of operations and remote control paneling, model MV-4-375 air control valve eliminates insufficient pressure or excessive dwell in air cylinders of over 6-in. diameter. It is suited to larger bore air cylinders used in such assembly methods as crimping and staking. Pilot-operated four-way master valve is used with two auxiliary bleeder valves to obtain correct cylinder pressure. With only one moving part, valve features bubble-tight shutoff, is noncorrosive and self-compensating for wear. It is designed for use with air, oil or water at pressures from 0 to 150 lb and is offered for standard pipe sizes of ¼, ⅜, ½ and ¾-in. Made by **Airmatic Valve, Inc.,** 1641 E. 40th St., Cleveland, O.

For more details circle **NED-1574** on enclosed inquiry slip

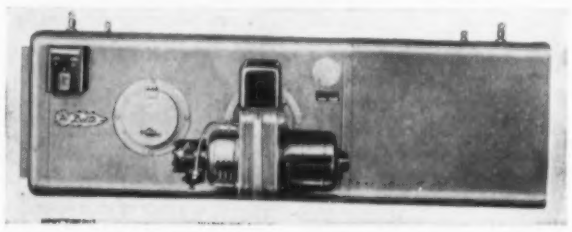
AMMETER SHUNTS
cover range from 30 to 1200 amperes

Made of manganim with large terminals for ample heat carrying capacity, line of 50-millivolt ammeter shunts is designed to JAN-S-61 specification. Three sizes, MSA, MSB and MSC cover range from 30 to 1200 amperes. Shunts are mounted on Bakelite blocks for insulation to 1500 v. They are suitable for use with all types and makes of 50-millivolt meters and with Simplytrol contact meter-relays. Five-foot long shunts leads are available. Made by **Assembly Products, Inc.,** 1002 Bell St., Chagrin Falls 1, O.

For more details circle **NED-1575** on enclosed inquiry slip

SUSPENDED HEATING FURNACE
oil-fired unit mounts out-of-way

Commercial buildings and small industrial plants can be heated readily with this suspended type oil-fired warm air furnace which can be operated with direct air blast



or connected to ducts. It can be mounted overhead, under floor or in other out-of-the-way location. Pipe legs can be provided. Model SU110 has output of 110,000 Btu per hour and model SU75 delivers 75,000 Btu per hour. Both feature atomizing oil burner, built-in refractory combustion chamber, air filter and large squirrel-cage blower for air distribution. Made by **Delta Heating Corp.,** Trenton 8, N. J.

For more details circle **NED-1576** on enclosed inquiry slip

CONTROLLED VOLUME PUMPING

This 24-page, 2-color Bulletin No. 151 is filled with details such as these: how Controlled Volume Pumps are used in diversified industries and in instrumentation, pilot plants, laboratories; how Milton Roy Controlled Volume Pumps readily handle difficult-to-pump materials such as slurries, viscous liquids, solids in suspension, etc.; features that make these pumps perform flawlessly on services where no other pump has filled the need; four pages of color charts showing with traffic light clarity the relative corrosion resistance of materials of construction to over 170 chemicals.

This kind of information, and much more, is yours for the asking. Write today for your free copy of Milton Roy Bulletin No. 151.

MILTON ROY COMPANY
1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

For more details circle **NED-1577** on enclosed inquiry slip

MEET ALL SANITARY WASHING FACILITY REQUIREMENTS

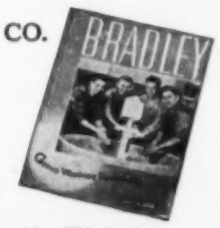
36" Circular Bradley serves 5 to 6 persons simultaneously—each with a spray of clean tempered running water.

• The sanitary washing facilities provided by Bradley Washfountains have long been recognized by industry. The central sprayhead serves each person with fresh running water. There are no faucets to touch or maintain . . . no contaminating water collects in the bowl.

With Bradleys space is saved, and installation costs greatly reduced because there are only 3 piping connections (hot water, cold water and drain) for each multi-person Washfountain.

Catalog 4701 describes and illustrates all types. Copy free on request.

BRADLEY WASHFOUNTAIN CO.
2253 W. Michigan St.,
Milwaukee 1, Wisconsin

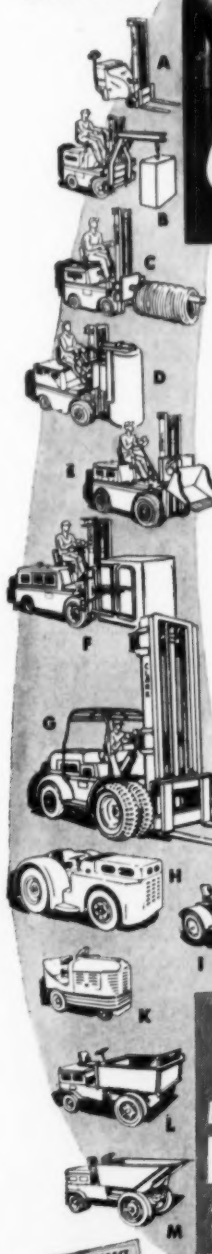


BRADLEY washfountains
Distributed through Plumbing Wholesalers

For more details circle **NED-1578** on enclosed inquiry slip

Across the face of the World a new Freedom spreads . . . like a strong man's smile . . . a Freedom from heavy burdens . . . a Freedom from beastly toil . . . a Freedom from useless costs . . . a Freedom from waste and spoil . . . It is a Freedom brought by Machines . . . and by Methods created by Men who engineer history for the greatest good of their Kind.

A new freedom



IN A WORLD divided by Iron Curtains and conflicting ideologies, it is refreshing to contemplate a better tomorrow made possible by a new-found freedom available to all—the Freedom from Toil, a Freedom springing from the use of modern machines.

The Clark Equipment Company is proud to have contributed to the emancipation of the laboring man through the development and creation of machines to bear his most exhausting physical burdens.

(A) Electric-Powered HAND TRUCK with Stacker. (B) TRUCLOADER with CRANE Attachment—1000 lb. cap.—gas or electric power. (C) CLIPPER with RAM Attachment—2000 lb. cap.—gas or electric power. (D) CARLOADER with BARTEL Device—3-4-5000 lb. cap. gas or electric power. (E) YARDLIFT with SHOVEL Attachment 2-4-6000 lb. cap. gas power only. (F) UTILITRUC with CLAMP Attachment 6-7-10,000 lb. cap. gas or electric power. (G) YARDLIFT—150 with Standard Forks 15,000 lb. cap. gas power only. (H) CLARKTOR—100-10,000 lb. draw bar pull. (I) CLARKTOR—47 to 104 tons hauling capacity on level. (J) CLARKETTE—5-10 tons hauling capacity on level. (K) CLARKAT—42 to 58 tons hauling capacity on level. (L) TRUCTRACTOR—Dump model 4000 lbs. capacity. (M) TRUCTRACTOR—Tip-model 4000 lbs. capacity.

CLARK
ELECTRIC AND GAS POWERED FORK TRUCKS
AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS

These Clark publications will help you and your workmen to enjoy the many benefits of this New Freedom. Any one—or all—of them will be sent to you on request.

CLARK EQUIPMENT COMPANY • Battle Creek 21, Mich.
Please send: ☐ Movie Digest ☐ Safety News ☐ Basic Facts ☐ Material Handling News
Name_____
Firm Name_____
Street_____
City_____ Zone____ State____

For more details circle **NED-1579** on enclosed inquiry slip

DON'T SCRAP IT!

LET "GLOVCO" RECONDITION IT
(LEATHER OR FABRIC)

DUST COLLECTOR BAGS • CONVEYOR BELTING
TARPAULINS • DROP CLOTHS • FILTER PADS

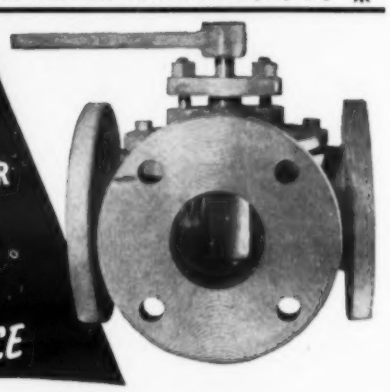
At a mere fraction the cost of replacement, we clean and professionally repair these and many other items, restoring them to new usefulness. Our pick-up and delivery plan in most industrial areas eliminates mechanical difficulties making this reconditioning plan work smoothly and to your complete advantage.

Our work glove reconditioning plan includes: pick-up, cleaning and sterilizing, repairing, reshaping, pairing, packaging and delivery. Users of the service record savings up to 49% in work glove costs. We will be glad to demonstrate this service at no cost to you. Representatives in all industrial areas

U. S. INDUSTRIAL GLOVE CORP.
9352 Roselawn Ave. Detroit 4, Mich.

For more details circle NED-1580 on enclosed inquiry slip

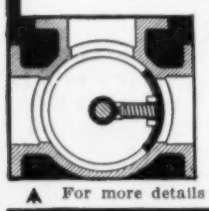
The simplicity of HONEYWELL 3-WAY TRANSFER VALVES will SAVE YOU MONEY and SPACE



THE HONEYWELL transfer valve is a simple, compact valve designed for diverting flow from one line to another—such as cooling water from one condenser to another or oil from one strainer to another. It replaces two conventional valves and fittings. Operates by movement of single lever . . . no chance of opening or closing both lines simultaneously.

Sizes 1½ to 8 inches . . . screwed or flanged. Available in high tensile iron body with iron or bronze trim. Body rating 125 lbs. ASA facing and drilling. Maximum inlet pressures 30 psi to 10 psi. Cost is low . . . act quickly.

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY, *Industrial Division,* 1912 Windrim Ave., Philadelphia 44, Pa.



MINNEAPOLIS Honeywell VALVE PRODUCTS
First in Controls

For more details circle NED-1581 on enclosed inquiry slip

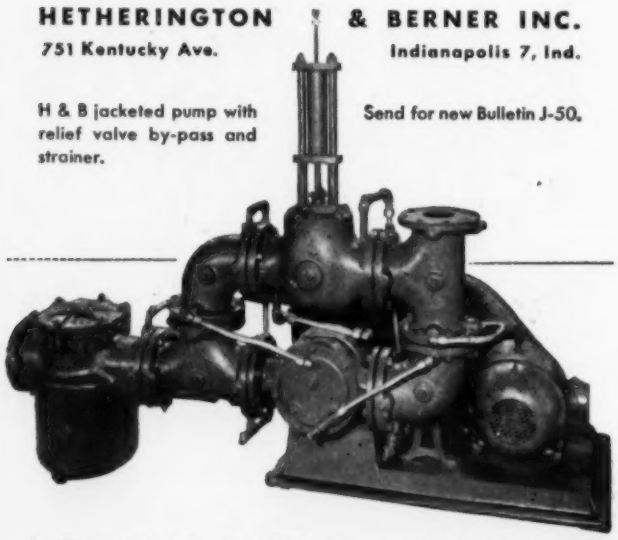
Jacketed Pumps
for handling viscous materials

Pumps for H & B Jacketed Systems are made especially for us to fit the flanges of H & B jacketed fittings. These pumps are engineered to provide maximum efficiency in handling viscous materials. H & B fittings are designed with a double wall forming an all-over jacket, completely insulating the interior line, with no dead spots or unprotected places.

HETHERINGTON & BERNER INC.
751 Kentucky Ave. Indianapolis 7, Ind.

H & B jacketed pump with relief valve by-pass and strainer.

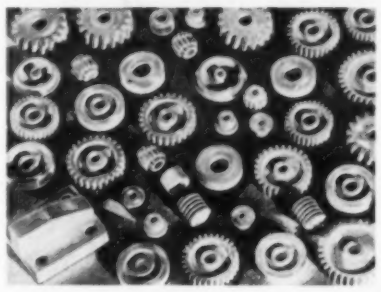
Send for new Bulletin J-50.



For more details circle NED-1582 on enclosed inquiry slip

New Processes and Materials

MOLDED NYLON PARTS made by low-cost tooling method



Injection molded nylon mechanical parts such as gears, gear blanks, bearings, bushings, worms, rollers, cams, wheels and valve seats can now be fabricated economically in large or small quantities by low-cost tooling method. Savings are notable in quantities of from 100 to a million pieces. Since tooling is minimized, delay encountered in building special molds is greatly reduced. Parts fabricated by **John A. English & Co.,** Nylomatic Div., Morrisville, Pa.

For more details circle NED-1583 on enclosed inquiry slip

O-RING MOLDING COMPOUND resists heat up to 225° F

Possessing tensile strength of 1450 psi with no loss of strength after 7-day aging period in either air or AXS 808 oil at 158° F, synthetic rubber O-ring molding Compound 90 exceeds requirements of Army Ordnance specification AXS 1440, class A. Elastomer is being used in O-ring seals for tanks and other military vehicles. It resists heat to 225° F and has low compression set and high hardness. Elongation is 210, with a 150 value after aging. Hardness is Shore 90, unaffected by aging. Volume swell in 7-day hot oil test is 4.6 per cent. Made by **Parker Appliance Co.,** Dept. NE, 17325 Euclid Ave., Cleveland 12, O.

For more details circle NED-1584 on enclosed inquiry slip

FLOORING COMPOUND can be applied to most substructures

Floors of concrete, wood, asphalt and composition materials, whether worn, cracked, rutted or disintegrating, can be renewed by Roc-Wood flooring material. It is made of chemically-treated hardwood fiber bonded together with plastic binder. Material will adhere to almost any substructure without underlayment and is laid by trowel. Hardening is by chemical action for unlimited use within 24 hours. Flooring material withstands vibration, repeated truck operation, termites, rot, acids, oils, brine and cleaning solutions. It is resilient, and slip skid-proof when covered with water and featheredges. Made by **Roc-Wood Flooring,** Dept. 12, 364 E. 23rd St., Chicago 16, Ill.

For more details circle NED-1585 on enclosed inquiry slip

STOP "FIDDLING" WITH BORING BAR SET-UPS

use EVEREDE BORING BAR HOLDERS

These WAYS BETTER:
- Saves "Fiddling" set-ups. No shimming . . . no "home made" improvising or grinding down of bars.
- Quick, easy adjustment for centering.
- Supplied with bushings, accommodating various sizes of straight shank boring bars.
- Made of tough, durable heat-treated cast steel to rigid specifications.

PRECISION-SET IN A JIFFY
for PRODUCTION BORING ON TURRET LATHES

The idea's so simple and proven-practical, we wouldn't charge a thing for it were it not for EVEREDE building the holder itself. If you're stymied for production-boring and have Turret Lathes available . . . here's your answer . . . already proven in some of the biggest and busiest plants around the country.

You just jiffy-slap the holder in the precision setting you want . . . and it's there to stay. You can't miss. You EveredE-Guaranteed can't miss!

WRITE FOR DETAILS

EVEREDE Tool Co.
2000 North Parkside Avenue Chicago 39, Illinois

For more details circle NED-1586 on enclosed inquiry slip

"MOTO-TRUCS are more dependable and give longer service greater value" say MOTO-TRUC USERS

Their shorter turning radius and rugged power enable them to do jobs no other "Walkie" can do.

● Since 1936, when Moto-Truc brought the first motorized hand truck, they have proven their superiority for all operations in the "Walkie Field."

● From zero cold to desert heat, they work with steady efficiency day after day. Ease of operation (all controls in handle), and a minimum of repair and replacement expense make them the favorite of both Labor and Management.

A "twist of the wrist" does it.

SEND FOR Bul. No. 51

DON'T BE SATISFIED WITH LESS THAN THE BEST.

THE MOTO-TRUC CO.
1953 E. 59th ST., CLEVELAND 3, OHIO
PALLET, PLATFORM AND HI-LIFT TRUCKS

For more details circle NED-1587 on enclosed inquiry slip

NEW THREAD COMPOUND
Licks Stud Freezing Even at 1800° F.!

SAFE for all high temperature applications!
SAFE for Stainless and Alloy Steels, too, will not pit or corrode!
IDEAL as a cutting compound to prevent galling of Stainless Steel!

FREE TEST SAMPLE! Send for YOURS TODAY

Make a convincing test of Fel-Pro C-5 "Hi-Temp" Thread Compound at our expense. Then you can be sure that C-5 will do everything we say it will do. See how it cuts heater dismantling time—how it cuts costly stud breakage and eliminates pitting. Then you will standardize on C-5 just as have some of the nation's largest refineries, utilities and process industries. Write for FREE Sample and data sheet TODAY!

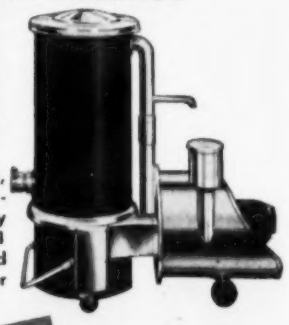
FEL-PRO C-5 "HI-TEMP" THREAD COMPOUND

FELT PRODUCTS MFG. CO.
1510 CARROLL AVENUE • CHICAGO 7, ILLINOIS

For more details circle NED-1588 on enclosed inquiry slip

HEAVY DUTY POWER
IN A LIGHTWEIGHT PACKAGE

WITH SPENCER PORTABLE VACUUM CLEANERS



For heavy duty general cleaning, offices, hallways, laboratories, conference rooms, etc. . . . wet pick-up . . . dry mop cleaning . . . 3 models (½, ¾ and 1 H. P.), sturdily built for long, hard service. (Larger machines available for plant use.)

WRITE DEPT. NE FOR DETAILS

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD

15P52

For more details circle NED-1589 on enclosed inquiry slip

Bench mounted HS4 with felt bob on plastic mold polishing.

Your **phone** will withstand the roughest use for more than a million calls. That record is due in part to a perfect molded surface free from pits and crevices where failures start. Haskins Flexible Shaft equipment polishes these precision molds to mirror-like perfection . . . assures constant, precise molding. Whatever your requirements for polishing, sanding, filing or grinding, you'll find the right Haskins machine and attachments with a proved record of fast, efficient performance. Your choice of mounting—bench, pedestal or suspended. Write today for full information. R. G. Haskins, 603 S. Washtenaw St., Chicago 12, Ill.

haskins HASKINS

FLEXIBLE SHAFT EQUIPMENT

For more details circle **NED-1590** on enclosed inquiry slip

for your file....

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Write to:
NORTHERN
ENGINEERING WORKS
2615 Atwater St., Detroit 7, Mich.

For Bulletins
T-105 AH-103 H-111 HL-115 G-700

NORTHERN CRANES AND HOISTS

For more details circle **NED-1591** on enclosed inquiry slip

precision built . . .
powerful . . .
highly efficient . . .

Cramer

synchronous
timing
motor

Widely used for applications requiring a constant speed at a given frequency, the Cramer Type SX Synchronous Motor is a self-starting permanent magnet type motor . . . producing an exceptionally high torque. Compact . . . precision-built . . . with output speeds from 60 RPM to 1/24 RPH. Write for complete data.

THE R. W. CRAMER CO., INC.
BOX 28, CENTERBROOK, CONN.

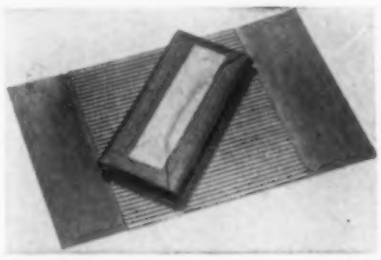
INTERVAL TIMERS • RESET TIMERS • CYCLE TIMERS • PULSE TIMERS
TIME DELAY RELAY • RUNNING TIME METERS • PERCENTAGE TIMERS

4CRB1

For more details circle **NED-1592** on enclosed inquiry slip

New Processes & Materials

CORRUGATED WRAPPER is of French wrap type



Offered in wide range of standard sizes to fit most packaging needs, French wrap type corrugated wrapper uses minimum of Kraft and is economical to use. Wrapper folds easily to form neat package and affords excellent protection for contents. Made by **Shelton Mfg. Co.,** 591A Ferry St., Newark 5, N. J.

For more details circle **NED-1593** on enclosed inquiry slip

CORROSION-RESISTANT PLASTIC for fabricating parts and fittings

Based on vinyl resins such as B. F. Goodrich Geon-404, Boltaron 6200 is a rigid nonplasticized polyvinyl chloride of high molecular weight that can substitute for stainless steel in fabrication of corrosion-resistant parts and fittings. Material is about one-sixth the weight of stainless; resists wear, abrasion and practically all chemicals; and has high tensile and impact strength. It can be welded, molded, extruded, fabricated and even machined after welding. In industrial processes where acid corrosion and oxidation below 165° F are basic problems, plastic is particularly applicable. Distributed in form of sheets, rods, fabricated parts, fittings and molding compounds, material is made by **Bolta Products, Inc.,** Dept. ND, P. O. Box 61, Lawrence, Mass.

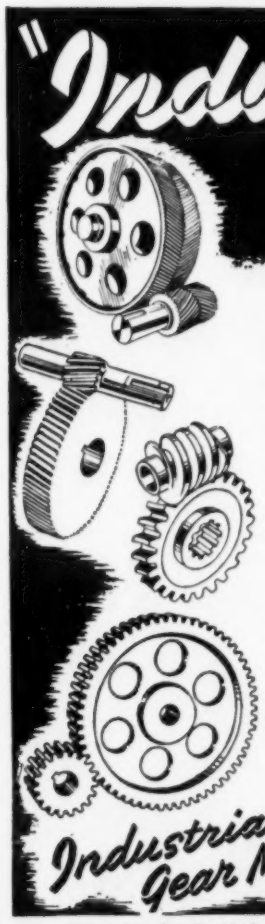
For more details circle **NED-1594** on enclosed inquiry slip

WINDOW GLAZING COMPOUND remains pliable to seal glass

Because it hardens only at the surface and remains soft and pliable underneath, SpeediGlaze window glazing compound cushions glass against wind and vibration and seals tightly against moisture, dirt and weather. It adheres tightly to glass, metal or wood surfaces and thus prevents rotting or rusting of sash. When it becomes necessary to replace broken or cracked window lights, compound peels off in strips to simplify the operation. It is supplied ready to apply with glazing tool or wide spatula and can be painted over within 48 hours after application. Available in light gray, white or green, compound is furnished in 1, 5 and 30-gal containers. Made by **Monroe Co.,** Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

For more details circle **NED-1595** on enclosed inquiry slip

"Industrial Gear"



THE *BEST KNOWN NAME* in the GEAR BUSINESS!

We're tooled up to handle your orders for small or large runs of all types of Gears, Sprockets and Splining, including Herringbone Gears up to 61" diameter with 18" face.

We furnish them "Heat-Treated" to suit your service . . . Steel Mill Type or otherwise—"cut only" from your stock or "furnished complete."

Large, Modern Daylight plant where personal service hasn't been lost sight of.

Tell us your requirements. We're on the Beam to help you.

Industrial Gear Mfg. Co.
4541 W. VAN BUREN ST.
CHICAGO 24, ILL.

For more details circle **NED-1596** on enclosed inquiry slip

Wire Shapes and Forms TO YOUR SPECIFICATIONS

● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER METALCRAFT CORPORATION
(*Formerly JESCHKE Wire and Specialty Company*)
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle **NED-1597** on enclosed inquiry slip

***Ohio* ADJUSTING SCREWS**

Ohio ST Thumb Screws

The shoulder will cover lock washers, wide wing spread.

Thread sizes,
No. 10-24 to ½-20

Materials: Low Carbon Steel and Brass

Ohio FS Adjusting Screws

Thread Sizes, No. 10-24 to ½-13
Material: Low Carbon Steel or Brass

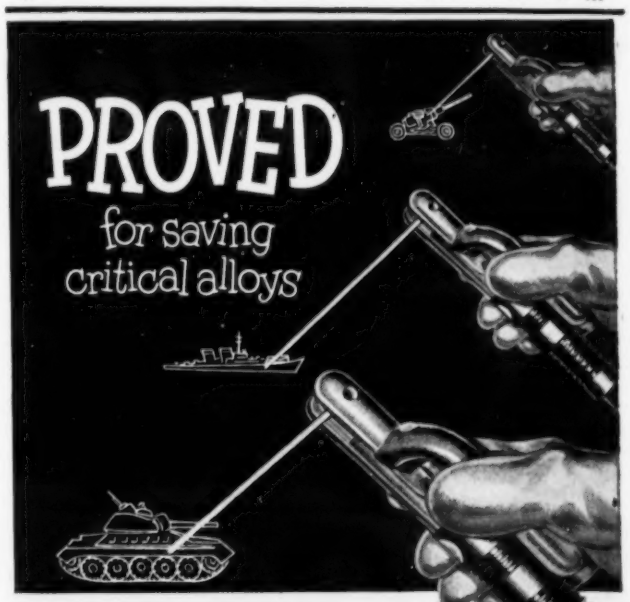
Turned easily by the fingers, pliers, monkey wrenches or socket wrenches.

Actually a triple-purpose screw:

1. Adjusting Screws
2. Leg Levelers
3. Self-Locking Crating Bolts

For samples and list of sizes, send to
THE OHIO NUT & BOLT COMPANY
608 FRONT ST. • BEREA, OHIO

For more details circle **NED-1598** on enclosed inquiry slip



Arcos Low Hydrogen Electrodes
***Replace Stainless* For Welding High Tensile Steels**

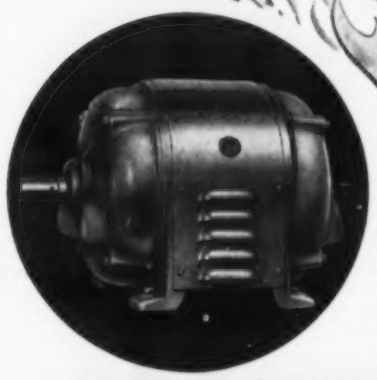
● Each day sees a growth in the requirements of nickel and chromium for defense production. The increased use of low hydrogen electrodes on welding high tensile steels is helping to free more of these critical alloys.

ARCOS low hydrogen electrodes are far removed from the experimental stage—they've already been "time tested and approved" on armor welding, as well as commercial applications.

ARCOS CORPORATION
1500 South 50th St., Phila. 43, Pa.

WELD WITH ARCOS
Stainless, Low Hydrogen and Non-Ferrous Electrodes

For more details circle **NED-1599** on enclosed inquiry slip



ASBESTOS CANNOT CARBONIZE!

No motor is more durable than its windings. In U. S. Uniclosed Motors all windings are *asbestos-protected.* Motor life is tremendously increased because asbestos cannot carbonize and withstands highest temperatures.

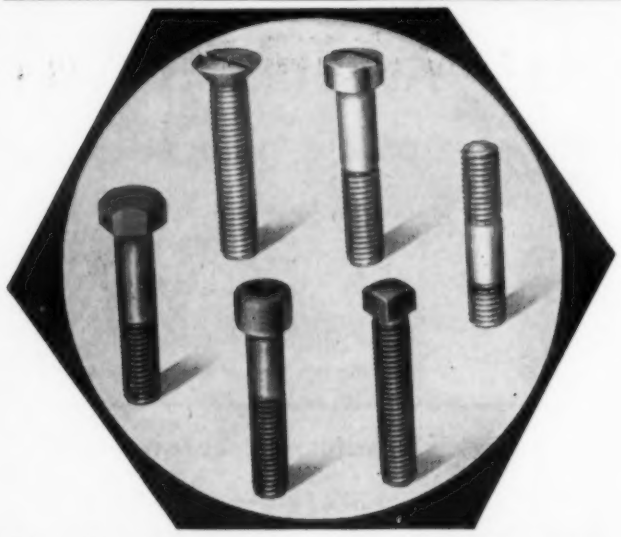
UNICLOSED

Attractiveness of armored Uniclosed design adds eye appeal. ¼ to 250 h.p. Write for interesting descriptive Bulletin featuring Uniclosed Motors.

U.S. ELECTRICAL MOTORS Inc.
Box 2058, Los Angeles 54, Cal. or Milford, Conn.

US MOTORS

▲ For more details circle **NED-1600** on enclosed inquiry slip ▲



Cleveland has specialized for 35 years in making *Top Quality*

CAP SCREWS
SET SCREWS • MILLED STUDS

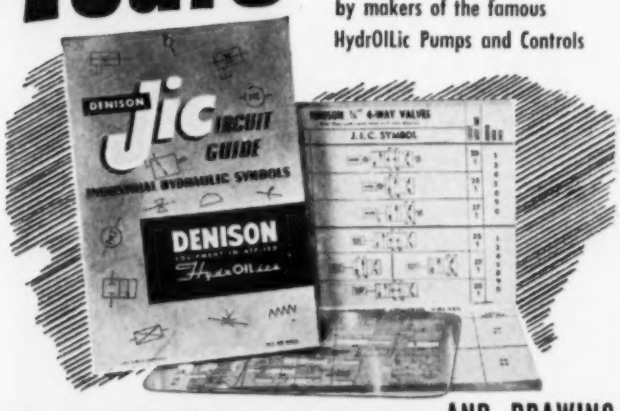
Write for catalog and prices

CLEVELAND *Top Quality* FASTENERS

THE CLEVELAND CAP SCREW COMPANY
2917 EAST 79TH STREET • CLEVELAND 4, OHIO
Warehouses: Chicago, Philadelphia, New York, Providence
Ask your Jobber for Cleveland Fasteners

▲ For more details circle **NED-1601** on enclosed inquiry slip ▲

Yours for easier hydraulic circuit planning — by makers of the famous HydrOILic Pumps and Controls



New JIC Circuit Guide AND DRAWING TEMPLATE

Denison's handy, 32-page JICircuit Guide, complete with plastic drawing template, gives you full information on JIC hydraulic symbols and their use. It saves time, makes circuit planning easier, quickly identifies symbols approved by the Joint Industry Conference. Although priced at $1.00, it is available *without cost or obligation* to anyone in hydraulic designing or engineering. Just submit your name and position; your kit will be sent promptly, with our compliments. Or if you contact the Denison representative in your area, he will see that you get a copy. Write today!

DENISON HydrOILics

The DENISON Engineering Co.
1151 Dublin Road
Columbus 16, Ohio

▲ For more details circle **NED-1602** on enclosed inquiry slip ▲

New Processes & Materials

INSTRUMENT MERCURY packaged in unbreakable bottle

Processed for use in instruments requiring a high degree of accuracy, instrument mercury is clean to fractional part in a million. Unbreakable 5-lb polyethylene bottle with flexible dispensing tip delivers mercury directly to instruments without danger of contamination. Mercury remains bright indefinitely in instruments and in storage. Metal is also available in larger containers. Made by **Bethlehem Apparatus Co.**, 820 Front St., Hellertown, Pa.

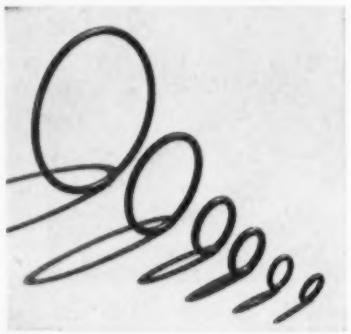
▲ For more details circle **NED-1603** on enclosed inquiry slip ▲

WOOD UNDERCOAT increases marginal wood utility

Fir and other open-grained marginal woods can be more widely utilized through use of PA 2063 synthetic white undercoat. When covered by lacquer, synthetic enamel or other top coat, such woods have desirable appearance of gum woods. Material has good filling properties and has ability to hold down grain. It also possesses a "holdout" characteristic which prevents glossy top coat from sinking in. Resulting gain in gloss amounts to at least 15 degrees on Gardner specular gloss meter. When wood is sanded, undercoat powders off. Drying is rapid, making possible sanding the same day as applied. Although developed for fir, undercoat can be used effectively on poplar, pine and bass, plus gum woods. Pastel shades will be available in future. Made by **United Lacquer Mfg. Corp.**, 1005 W. Elizabeth Ave., Linden, N. J.

▲ For more details circle **NED-1604** on enclosed inquiry slip ▲

O-RING SEAL COMPOUND inert to most petroleum-base fluids



Possessing good high and low temperature properties, O-ring seal compound for use in tractor hydraulic systems can be used with almost any petroleum-based hydraulic fluid. Based on B. F. Goodrich Chemical Co.'s Hycar American rubber which is inert to most oils, greases, chemicals and has good shock and abrasion resistance, compound in seals can be used with variety of hydraulic fluids tractor operator might use. Compound made by **Precision Rubber Products Corp.**, 3110 Oakridge Dr., Dayton 7, O.

▲ For more details circle **NED-1605** on enclosed inquiry slip ▲

easily mounted

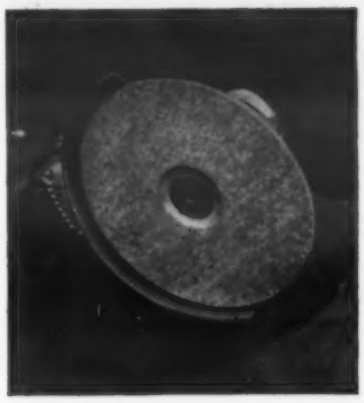
in any position, altho designed for vertical mounting. Back mounting or front mounting.

AN **AGASTAT** TIME DELAY RELAY for every requirement

A'G'A 1027 NEWARK AVE., ELIZABETH 3 NEW JERSEY

A'G'A AGASTAT TIME DELAY RELAY · A'G'A STIMSONITE REFLECTORS · A'G'A AIRPORT LIGHTING · A'G'A MARINE LIGHTING EQUIPMENT

▲ For more details circle **NED-1606** on enclosed inquiry slip ▲



NEW *FLEXIBLE* NORTON *REINFORCED* HUB WHEEL

for quick, easy, safe portable finishing

This new Norton BFR flexible *Reinforced* Hub Wheel — teamed up with the heavy-duty Norton BD *Reinforced* Hub Wheel — multiplies the number of jobs you can profitably do with your standard portable grinders and sanders.

The Norton BFR wheel can't be beat for such jobs as smoothing welds and contours, removing mold marks and rust prior to painting, cutting off small gates and risers and notching big ones. It comes in 7" and 9" diameters in ⅛", 3/16", and ¼" thicknesses. Specify A 24-K BFR for the average job.

Ask your nearby Norton distributor about new, improved Norton portable grinding wheels. He's listed under "Grinding Wheels" in your classified telephone directory. Or write direct to Norton Company, Worcester 6, Mass. Distributors in all principal cities.

NORTON ABRASIVES
Making better products to make other products better

▲ For more details circle **NED-1607** on enclosed inquiry slip ▲

TUBE SWELLING CAN'T KILL THIS HOSE

Concord #20* Steam Hose

This hose gives you the exclusive protection of tough stainless steel wire braid inner-lining that absolutely prevents tube swelling under continuous high pressure.

You are thus assured of permanent retention of original inside hose diameter . . . protected against swelling and constriction of tube . . . guaranteed full flow of steam *always* . . . and you can always re-couple easily when necessary.

Get in touch with your nearby BWH Distributor. He'll give you the complete story on BWH CONCORD #20 Steam Hose, or write

*Pat. applied for

BOSTON WOVEN HOSE & RUBBER CO.
Distributors in all Principal Cities
PLANT: Cambridge, Mass • P.O. Box 1071, Boston 3, Mass., U.S.A.

▲ For more details circle **NED-1608** on enclosed inquiry slip ▲

SEND FOR THE NEW P 40 PAGE WATER HEATER CATALOG

p-k catalog No. 202 provides you with a simple, rapid means of selecting the correct hot water heater for forced circulation. Capacities from 95 to 101,000 gph. Steam pressures range from 0 to 100 psig. Standard "U" Tube Heaters are available in 2- 4- or 6-pass construction. Water temperatures range from 40° to 100°F. inlet and 80° to 300°F. outlet.

other TAB INDEX FEATURES: Condensate Cooler tables • Dishwater Booster Heater tables • Gravity circulation tables • Hot Water Service Heater tables • Pressure drop tables • Typical piping arrangement

the P Patterson-Kelley Co., Inc.

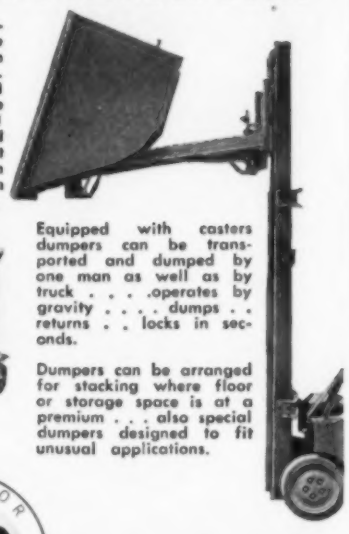
122 BURSON ST., EAST STROUDSBURG, PENNA.

▲ For more details circle **NED-1609** on enclosed inquiry slip ▲

Dependable DUMPERS

Speed Production . . . Cut Costs

Leading manufacturers have increased their production while actually cutting costs with DEPENDABLE DUMPERS . . . standard ½ and 1 cubic yard capacity hopper dumpers are available in steel from #11 ga. to ¼" plate . . . designed to fit any fork or platform lift truck . . . you can depend on DEPENDABLE for the finest in materials handling equipment.



Equipped with casters dumpers can be transported and dumped by one man as well as by truck . . . operates by gravity . . . dumps . . returns . . locks in seconds.

Dumpers can be arranged for stacking where floor or storage space is at a premium . . . also special dumpers designed to fit unusual applications.

Write for literature and prices

STREATOR Dependable MANUFACTURING CO. STREATOR • ILLINOIS SINCE 1913

For more details circle NED-1610 on enclosed inquiry slip

Announcing

THE GREAT NEW

"500" RIDGID

PIPE & BOLT THREADING MACHINE

Full of typical RIDGID improvements

- Range ⅛" to 2" pipe; ¼" to 2" bolts.
- Cutting, threading and reaming tools operate independently and right up to chuck, swing up out of way when not in use.
- New RIDGID quick-opening quadritype, dualtype and monotype die heads save time and work.
- Concealed oil system, reversible pump, no priming.
- More than 20 other efficiency improvements—see this remarkable new RIDGID "500" at your Supply House!

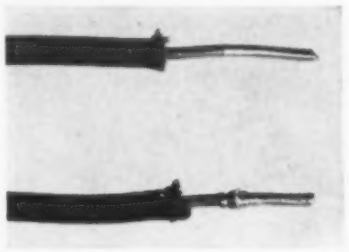
THE RIDGE TOOL CO. • ELYRIA, OHIO

RIDGID Work-Saver Pipe Tools

For more details circle NED-1611 on enclosed inquiry slip

New Processes & Materials

CREAM SOLDERING FLUX protects metal from corrosion



Buffered to minimize corrosion, Fargail soldering cream can be used on all operations where soldering paste is indicated. Metals such as phosphor bronze and nichrome can be soldered as easily as tinned steel, galvanized iron, copper and brass. Because flux gives off no toxic fumes, it is safe to use under all conditions. Conductivity on electrical equipment is nil, and it actually protects the metal soldered from corrosive attack. Cream can be used effectively for sweating copper fittings because its scavenging action is such that solder becomes highly fluid. Illustration shows, top and bottom, wires tinned with Fargail and paste flux respectively, using low tin solder in both cases. Six ½-lb cans are offered at $2.50. Made by **Farrelloy Co.**, 1246 N. 26th St., Philadelphia 21, Pa.

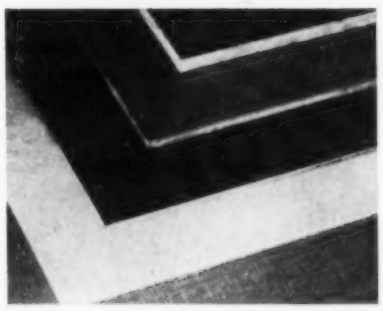
For more details circle NED-1612 on enclosed inquiry slip

MACHINERY CLEANING SOLUTION nontoxic material will not burn

Formulated to be sprayed on machinery and other areas requiring cleaning, Kelite No. 28 cleaning material is not toxic and will not burn. It is also adaptable to conventional wipe method. After initial cleaning to remove heavy soil deposits, it can be diluted for periodic maintenance cleaning. Material cleans by penetration and displacement of dirt and grime and is noncorrosive to machinery and safe for use on paint. It leaves a film-free surface for immediate repairing. Made by **Kelite Products, Inc.**, 3401-A W. Touhy Ave., Chicago 45, Ill.

For more details circle NED-1613 on enclosed inquiry slip

PLASTIC LAMINATE is high-tensile, high-impact type



Usable for service parts such as product housings, electric terminal strips and structural electrical parts as well as for stressed chemical equipment requiring corrosion resistance, E1B plastic laminate is offered in 1/16, ⅛, 3/16, ¼, ⅜ and ½-in. thicknesses in 18 x 24-in. sheets. Low water absorption, 0.2 per cent, adapts material for out-of-doors and immersed applications. Tensile strength is 20,000 psi, compressive strength is 24,000 psi and impact is 18 ft lb per in. unnotched. It is resistant to most acids, salts, mild alkalies and organic solvents. Dielectric strength is 325 v per mil; arc resistance, 120 seconds; power factors, 4.7 and dielectric constant, 4.7. Made by **Dynakon Corp.**, 5511 Hough Ave., Cleveland 3, O.

For more details circle NED-1614 on enclosed inquiry slip

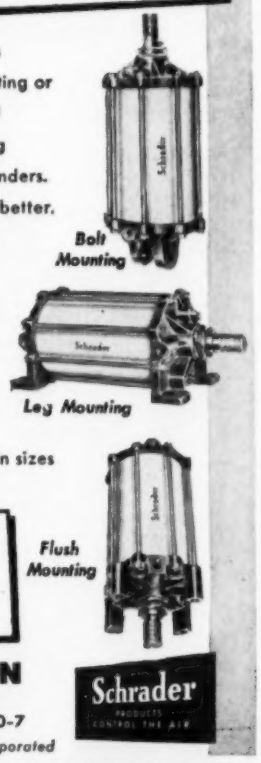
Make Hard Work EASY with these BRAWNY NEW AIR CYLINDERS

What's your problem? Operating press brakes, clutches, doors, clamping work, lifting or lowering, pushing or pulling heavy loads?

Investigate the time-saving, work-saving advantages of the new Schrader Air Cylinders. See how they do hard jobs faster, safer, better.

See what Schrader has done to make this new series of air cylinders tops for ruggedness, for fast cycle operation, and ease of mounting. See how interchangeability of the parts cuts down maintenance.

Schrader Air Cylinders are made in Single Acting and Double Acting types; in sizes from 1" to 8" bore; and in any stroke.



Write for complete information and literature about Schrader Air Cylinders and Air Control Valves. For information about hundreds of other Schrader Air Control Products . . . Press Controls, Air Ejection Sets, Air Line Couplers, Blow Gun etc., ask for 72-Page Catalog.

A. SCHRADER'S SON
478 Vanderbilt Ave.
BROOKLYN 17, NEW YORK, Dept. ND-7
Division of Scovill Manufacturing Company, Incorporated

Schrader PRODUCTS CONTROL THE AIR

For more details circle NED-1615 on enclosed inquiry slip

PYOTT CAST IRON PULLEYS

DEPENDABLE SINCE 1896

The Complete Line . . . Special as well as standard sizes. 2" to 102" diameters. Every type of hub, spoke, face width and rim design.

The Balanced Line . . . Pyott Cast Iron Pulleys may be operated at running speeds up to 5000 FPM, depending on diameter and type of pulley.

Prompt Delivery . . . Immediate delivery on Que-Dee Pulleys in popular diameters and face widths from complete factory stocks or your mill supply. On special pulleys Pyott foundry skill and stock patterns will quickly produce the quality you want, at a saving in cost. Just send a rough sketch of the pulley you want, including accurate dimensions.

WRITE FOR PULLEY CATALOG

PYOTT FOUNDRY & MACHINE CO.
335 North Sangamon Street, Chicago 7, Illinois • Tel. MOnroe 6-0295

Standard and special Sizes in Flat Belt Pulleys and V-Belt Sheaves . . . Que-Dee Flat Belt Pulleys and V-Belt Sheaves . . . Yee-Tex V-Belts . . . Gears . . . Flywheels

For more details circle NED-1616 on enclosed inquiry slip

Do you have this valuable handbook?

it's full of useful data on springs

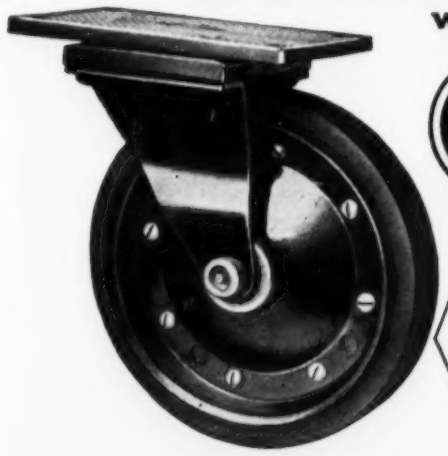
This revised edition of the "Accurate Handbook of Technical Data on Springs" offers 40 pages of clear, concise data on such subjects as design formulation, load deflection and the proper methods of specifying springs. Also presented are several helpful short cuts for making spring calculations. Engineers and designers will find the handbook invaluable. Write for your free copy today!

ACCURATE SPRING MFG. CO.
3805 W. Lake Street Chicago 24, Illinois

Accurate Springs — Springs • Wire Forms • Stampings

For more details circle NED-1617 on enclosed inquiry slip

Efficient Materials-Handling at the "Grass Roots" level with Colson CASTERS



Model 4-807-65 Swivel fork caster—ideal for medium weight industrial equipment

● No matter how modern or streamlined your truck fleet, it's no better than the wheels and casters it rolls on. Surprising—how a few dollars spent for Colson casters can increase the efficiency of hundreds or thousands of dollars worth of rolling stock. There's a Colson for every need—from light casters for office furniture to heavy-duty jobs of 1500 pounds capacity.

Colson also manufactures a wide range of trucks—hand trucks, platform trucks, box trucks, drum and barrel trucks and Lift-Jack Systems. Write us or consult your phone book (under "Casters" or "Trucks—Industrial") for the Colson representative near you.

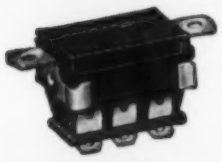
Write today for free 68 Page Caster Catalog

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • • LIFT JACK SYSTEMS • • INDUSTRIAL TRUCKS

For more details circle NED-1618 on enclosed inquiry slip

FOR PUBLIC ADDRESS, RADIO, and kindred fields, specify JONES 400 SERIES PLUGS AND SOCKETS of proven quality!

P-406-CCT


S-406-AB

Double Contact Area

Phosphor bronze knife-switch socket contacts engage both sides of flat plug contacts.

Socket contacts phosphor bronze, cadmium plated. Plug contacts hard brass, cadmium plated. Insulation molded bakelite. Plugs and sockets polarized. Steel caps with baked crackle enamel. 2, 4, 6, 8, 10, 12 contacts. Cap or panel mounting.

Information on complete line, in Jones Catalog 18: Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-1621 on enclosed inquiry slip

• DIPPED RUBBER PARTS
• EXTRUDED RUBBER PARTS
• MOLDED RUBBER PARTS
• DIE CUT RUBBER PARTS
• RUBBER COVERED EQUIPMENT

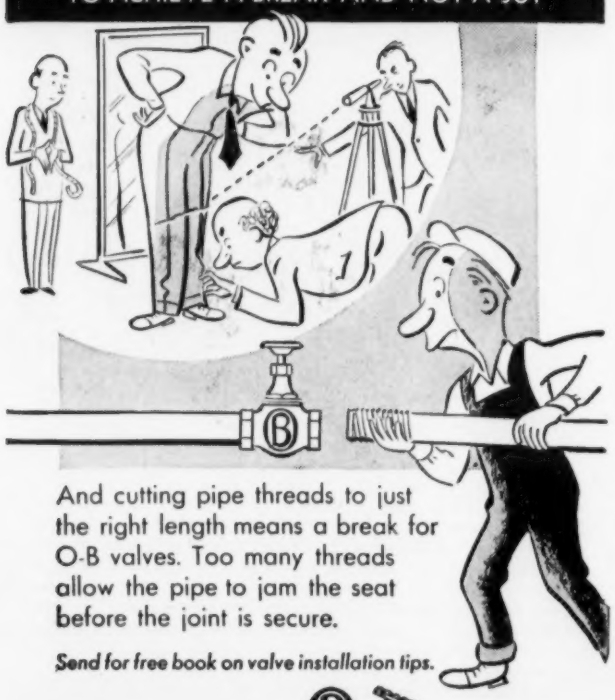
ARco RUBBER PROCESSORS

Since both the rubber compounding and processing of parts and equipment are done in our plant under our own supervision, you can expect ARCO products to meet your most exacting specifications . . . Write for our new catalog.

AUTOMOTIVE RUBBER COMPANY, INC.
PLANTS IN DETROIT AND HOUSTON
8601 EPWORTH BLVD. • DETROIT 4, MICHIGAN

For more details circle NED-1622 on enclosed inquiry slip

WITH EXTRA CARE, PETE'S PANTS ARE CUT TO ACHIEVE A BREAK AND NOT A JUT



And cutting pipe threads to just the right length means a break for O-B valves. Too many threads allow the pipe to jam the seat before the joint is secure.

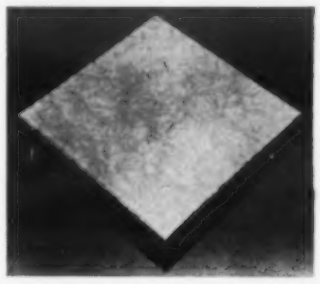
Send for free book on valve installation tips.

Ohio Brass VALVES
MANSFIELD, OHIO

For more details circle NED-1623 on enclosed inquiry slip

New Processes & Materials

CLEANABLE ACOUSTICAL TILE
plastic surface is moistureproof



Consisting of decorative plastic film stretched over the face of Fiberglas acoustical tile and cemented to the edges, Membrane-Faced tile is easy to wash or scrub, has low moisture absorption properties and deadens sound. Plastic film acts as drum head and transmits sound by vibration into the board which traps sound in millions of tiny cells formed by intertwining of fine glass fibers. Gray mother-of-pearl design is now available, with alternate colors and textures being offered soon. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

For more details circle NED-1624 on enclosed inquiry slip

LAPPING COMPOUNDS
are ready-mixed and water soluble

Ready-mixed lapping compounds that are soluble in water are now available to manufacturers of brass and bronze plug valves. Grades of grit sizes which can be had are coarse, medium fine, fine and extra fine, to suit all plug valve lapping requirements. Solubility of suspended medium in water allows finished parts and machines to be cleaned with ordinary water, without recourse to solvents or strong alkalies. Formulated by **United States Products Co.**, Dept. A, 518 Melwood St., Pittsburgh 13, Pa.

For more details circle NED-1625 on enclosed inquiry slip

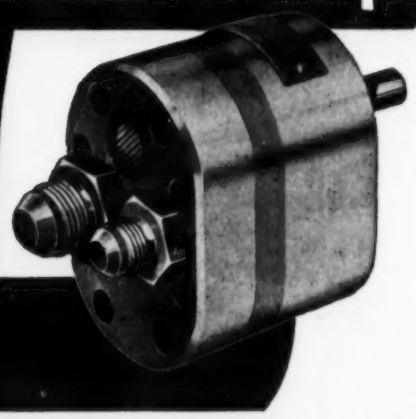
MASTIC FLOORING
resists acids, alkalis, water, heat

High degree of resistance to liquid and gaseous acids and alkalies, water and heat is imparted to Texas Jack industrial floor resurfacer by utilization of Uintahlite, a

mineral stabilizer. Flooring material has good stability and compressive strength. Dimensional movements such as ruffing, waving and transfer of irregularities in surface of old floor through new surface are practically eliminated. Propulsion effort and indentation under static loadings are considerably reduced. Material can be used with coal tar water emulsion which, when thinly coated over mastic floor surface, offers protection against oils, gasoline, most solvents and virtually all acid and alkaline solutions. Made by **Flash-Stone Co.**, 3727 Pulaski Ave., Philadelphia 40, Pa.

For more details circle NED-1626 on enclosed inquiry slip

Hydraulic Pumps



HYDRAULIC PUMPS — precision-made pumps for highest volumetric efficiency. Volumes from .05 to 10 gpm against pressures to 2000 psi.

FLUID MOTORS develop to 6 H.P. Low starting torque, compact design.

For EASTERN'S HYDRAULIC PUMP CATALOG
Write to: DEPT. HA

by Eastern INDUSTRIES INC.
296 Elm Street
New Haven, Conn.

For more details circle NED-1627 on enclosed inquiry slip

Strongest

in every size

Each size of Worthington QD sheaves is designed for the load it has to carry—rather than proportioned from one basic design.

I-beam spokes on driven sheave help carry heavier load with less sheave weight.

Give your men the convenience of QD's exclusive two-part taper-mated cone-grip construction and long pull-up bolts—easy to get on, easy to get off, yet always tight on the shaft. And give your drives the strength of QD's sized-for-load designs, locked shaft key and stronger I-beam spokes.

Write for Bulletin V-1400-B7F. Worthington Pump and Machinery Corporation, Multi-V-Drive Sales Division, Buffalo, N. Y.

WORTHINGTON

MV.1

For more details circle NED-1628 on enclosed inquiry slip

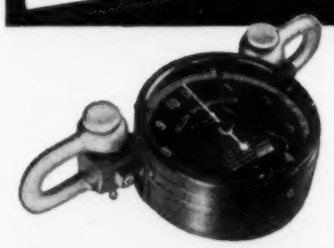
Let this all-purpose DEWALT save money in Your plant

Here is the ideal, all-purpose machine you need to cut costs and step up production in your plant. DeWalt is *many* machines in one! It dadoes, routs, shapes, tenons, grinds, sands, etc.! It's fast, accurate, safe, dependable. It takes up little floor space—and streamlines all your cutting operations. Write for catalog. DeWalt, Inc., Dept. NE-2, Fountain Ave., Lancaster, Pa.

DEWALT INC.
A subsidiary of American Machine and Foundry Co.

For more details circle NED-1629 on enclosed inquiry slip

DILLON DYNAMOMETERS remove all guesswork from tension or stress problems



WIDE CAPACITY RANGE

500 to 50,000 lbs. The perfect lab or field instrument for showing tension or stress. Hundreds of uses. Small—Light—Accurate—Low cost. Write today for illustrated bulletin.

√ Testing Wrecking Truck Winch and Boom. Modern automobile wrecking trucks are often called upon to lift and pull exceedingly heavy loads. Above, the DILLON DYNAMOMETER is checking these factors in a new model wrecking truck manufactured by the Ashton Power Wrecker Equip. Co., Inc. Pull is against a heavy semi-trailer. Tests like these on heavy equipment are very easy with a DILLON DYNAMOMETER.

√ Here is a DILLON DYNAMOMETER at the Ford Motor Co. in Dearborn, Mich. employed to "buckle" a car frame through ordinary turnbuckle. In this way, the Body and Frame Section laboratory was able to determine the load necessary to take full shock absorber punishment.

W. C. DILLON & CO., INC.
PRECISION INSTRUMENTS FOR PRECISION TESTING
1421 NE SOUTH CIRCLE AVENUE • FOREST PARK, ILLINOIS

For more details circle NED-1630 on enclosed inquiry slip

WHITNEY ROLLER CHAIN *Flexible Couplings*

FOR YOUR DIRECT POWER DRIVE APPLICATIONS

Whitney Roller Chain Flexible Couplings offer the equipment manufacturer and machine user a practical and efficient unit for connecting power equipment to direct drives. All steel construction . . . precision roller chain and hardened cut tooth sprockets provide positive operation . . . assure long life.

Check these Whitney Flexible Coupling features, easily installed, allows for motor end float, disconnects without removing shafts or bearings, allows for slight shaft misalignment.

You can use Whitney Flexible Couplings wherever a positive yet flexible direct drive is required. Write for information.

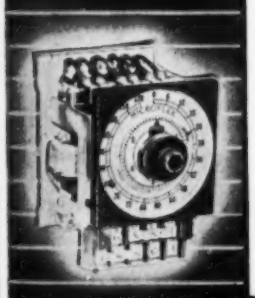
WHITNEY CHAIN COMPANY

203 Hamilton Street Hartford 2, Conn.

For more details circle NED-1631 on enclosed inquiry slip

There is an EAGLE TIMER to *SPEED* up Your INDUSTRIAL PROGRESS

Let Eagle help increase your production and save many man hours with automatic opening and closing of electrical circuits. Eagle builds a timer for your individual process. Send us your timing problem or write for Bulletin 340.



EAGLE SIGNAL *Industrial Timers*

EAGLE SIGNAL CORPORATION MOLINE, ILL.

Export Agent: 13 EAST 40th ST., NEW YORK 16, N. Y.

For more details circle NED-1632 on enclosed inquiry slip

IF YOU WALK ON IT IT CALLS FOR OPEN STEEL FLOORING

It's tailor-made to suit your particular plant requirements

Wherever walking, working or wheeling surfaces are required Open Steel Flooring provides basic safety, strength and endurance. It offers the practical and versatile advantages of sure footing, maximum ventilation and light, and adaptability to your specific load-bearing and heavy-duty needs.

The new Idea Book "Versatile" shows where and how to use Open Steel Flooring—gives Specifications and full description of this top quality grating. *Write for a copy.*

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MEMBERS

These manufacturers assure top quality engineered grating

WALTER BATES CO., INC. Joliet, Illinois
THE TRI-LOK COMPANY Pittsburgh, Pa.
BLAW-KNOX COMPANY Pittsburgh, Pa.
HENDRICK MANUFACTURING CO. Carbondale, Pa.
IRVING SUBWAY GRATING CO., INC. Long Island City, N. Y.
STANDARD STEEL SPRING CO. Gary, Indiana

For more details circle NED-1633 on enclosed inquiry slip

New Processes & Materials

QUICK-SETTING CEMENT anchors bolts in concrete

Permanent fastening of machinery, hand rails, seats or equipment of any type can be facilitated by use of Por-Rok quick-setting cement to set anchor bolts in concrete. After drilling hole in concrete and locating bolt, cement is mixed with water and poured into opening around bolt. Within 15 to 30 minutes, bolt is anchored permanently. Material is self-bonding, self-leveling, oil resistant and will not shrink. It has compression strength of 4500 psi. Made by **Hallemite Mfg. Co.,** Dept. NED, 2446 W. 25th St., Cleveland 13, O.

For more details circle NED-1634 on enclosed inquiry slip

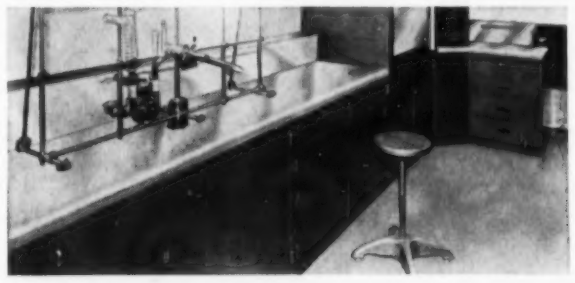
PLASTIC FINISH for polystyrene is smooth, lustrous

When applied by dipping or spraying, C 5138 plastic finish for polystyrene flows easily and dries smooth and lustrous. Finish can be easily machined. It is also practical for use as substitute for glass in manufacturing toys, novelties, office and commercial supplies. Durability, good adhesion and resistance to perspiration are features. Product will not attack polystyrene and cause minute cracks and wrinkles. It is available in all standard colors, in gloss, semigloss and flat. Made by **United Lacquer Mfg. Corp.,** 1005 W. Elizabeth Ave., Linden, N. J.

For more details circle NED-1635 on enclosed inquiry slip

STAINLESS STEEL TOPS developed for laboratory furniture

Highly resistant to action of most laboratory reagents, stainless steel tops for laboratory furniture are available for fit basic models of Fisher laboratory units which



include tables, cupboards, drawer-cupboards and drawer units. One-piece top is supported by thick plywood sections and is integral with splashback and reagent shelf. Edges are continuation of upper surface and adjacent edges are welded. Rolled front forms drip edge. Concealed bolts and Neoprene strips seal joints between adjacent units in an assembly and provide liquid-tight fit. Made by **Fisher Scientific Co.,** 715 Forbes St., Pittsburgh 19, Pa.

For more details circle NED-1636 on enclosed inquiry slip

Lighter...faster Rotor grinders "PAID OFF" in 48 days

JOB: Grinding welds on truck cabs. Using slow, 20-pound electric grinders. Only 2800 r.p.m. under load.

SOLUTION: Rotor Application Engineer suggested changing to Rotor 6" Air Grinders that weigh only 9¼ pounds. Speed 5300 r.p.m. under load.

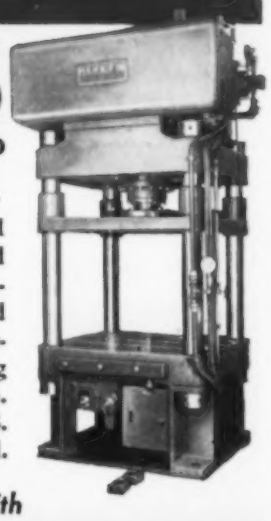
RESULTS: Stepped up metal removal and increased wheel life. Lower maintenance. Cut man-hours per cab. Savings paid off cost of Rotor Grinders in 48 days on basis of 50% use factor. Write for Catalog No. 38.

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-1637 on enclosed inquiry slip

helpful HYDRAULIC PRESS *catalog*

75 STANDARD MODELS 5 TO 150 TONS



Keep it in your machine tool file. Hannifin Standardized Hydraulic Presses Catalog contains complete descriptions and specifications on Hannifin Forcing Presses, Straightening Presses, Column-Type Presses. Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Ill.

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Air Cylinders • Hydraulic Cylinders • Hydraulic Presses
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For more details circle NED-1638 on enclosed inquiry slip

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Better, ready-to-use direct positive prints are yours in seconds with DRIPRINT

Whether you want prints with black, blue, red or sepia lines, you'll get better results with DRIPRINT. Made directly from your translucent original without a negative, these superior Dietzgen ammonia-process prints on paper or cloth give you denser, sharper lines on pure white backgrounds every time.

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For more details circle NED-1639 on enclosed inquiry slip

"Weld-Bilt" EQUIPMENT GIVES YOU LONGER SERVICE IN LABOR-SAVING MATERIALS HANDLING

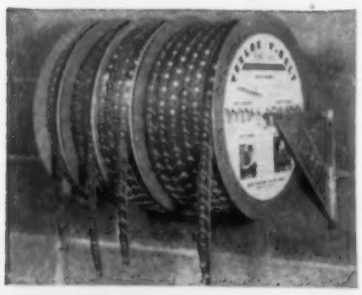
You can SEE the greater strength and durability in WELD-BILT Equipment . . . in heavier arc-welded construction, in sturdier operating parts, in many innovations that assure easier, friction-free operation. Every piece of "Weld-Bilt" equipment is designed to save operator fatigue, protect product and save money both on original cost and maintenance expense.

You can easily PROVE "Weld-Bilt's" superiority through many more years of actual performance in hundreds of plants all over the Nation. It means your lowest possible investment-per-year in time and labor saving.

For more details circle NED-1640 on enclosed inquiry slip

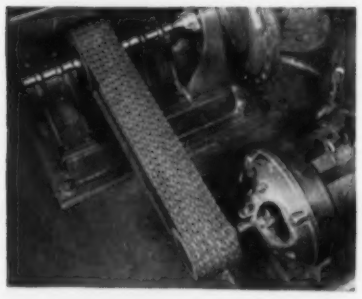
VEELOS Pays for Itself

The Adjustable V-Belt



In Inventory

Veelos reduces required v-belt stocks. Just 4 reels of Veelos cover *every* v-belt need (up to 316 sizes) in the O, A, B and C widths. Stock only one reel for each width of belt you use—and *any length is readily available.*



In Maintenance

Veelos can be installed quickly and easily without dismantling outboard bearings or moving motor. Individual belts can be adjusted by simply removing or adding links.

In Operating Efficiency

Uniform tension can be maintained on all Veelos belts to provide vibrationless, full power delivery. Simple adjustment of each belt means that *matched sets stay matched.*

Write for your copy of the Veelos Data Book. It gives complete facts.

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

VEELOS THE LINK V-BELT

Adjustable to any length • Adaptable to any drive

For more details circle NED-1641 on enclosed inquiry slip

GR

NEW a-c operated

megohmmeter

½ to 2,000,000 Megohms

with Constant 500 Volts Across Unknown

A portable, rugged instrument designed for both field and laboratory use — many operating conveniences — ideal for insulation resistance measurements on rotating electrical machinery, cables, transformers, capacitors, household appliances — very simple to use, the value of the unknown resistance being indicated as the product of the meter reading and one of the 6 multiplier settings — guard terminals provided for measuring ungrounded and grounded 3-terminal resistances.

Type 1862-A
Megohmmeter: $225

Write for Complete Data

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass.
90 West St. NEW YORK 6 *920 South Michigan Ave.* CHICAGO 5
1000 North Seward St. LOS ANGELES 38

For more details circle NED-1642 on enclosed inquiry slip

New Processes & Materials

HEAT-ABSORBING GLASS
green tint also reduces glare

Reduction of eye-strain, absorption of heat, prevention of fading or bleaching and minimizing of glare are some of the advantages offered by Solex flat glass for general use. It has slight greenish tint and absorbs most of the solar infrared and ultraviolet rays, yet it transmits adequate soft daylight for clear visibility.

Use of this glass in window openings which have direct solar exposure results in a room that is 10 to 20° F cooler than when ordinary window glass is used. This is particularly advantageous when summer air conditioning is employed. Twindow double-glazed window units with exterior light of Solex and interior light of regular plate glass adds materially to the insulating value. Not only is the summer heat gain decreased, but the winter heating loss is minimized. Made by **Pittsburgh Plate Glass Co.**, Dept. NED, 632 Duquesne Way, Pittsburgh 22, Pa.

For more details circle NED-1643 on enclosed inquiry slip

RUST PREVENTIVE PAINT
one coat hides old metal surface

Ten minutes under normal conditions is all that is required to dry No. FD-425 rust inhibitor paint. One coat will completely cover old metal surfaces. It withstands temperatures from −100 to plus 250° F and is resistant to salt air and fumes. Application can be over damp interior or exterior surfaces, galvanized metal and new or rusted metal surfaces of all kinds. Semigloss finish paint is offered in several colors, plus aluminum and clear. Made by **United Laboratories, Inc.**, 16804 Euclid Ave., Cleveland 12, O.

For more details circle NED-1644 on enclosed inquiry slip

BEARING BLUE
facilitates surface finishing

Compounded for spotting, scraping and fitting machine component parts and mating surfaces, Bearing Blue is packaged in 4-oz cans for convenience of use. It will not dry out and is ready for use in practically all shop applications. Free sample will be furnished upon request to **Dayton Rogers Mfg. Co.**, 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

For more details circle NED-1645 on enclosed inquiry slip

Save space . . . save time . . . use Ward Leonard's AXIOHM 5 and 10 watt resistors in "close quarters" applications.

No nuisance of lugs, screws, bolts. Axial leads are the only mounting support needed—easy to cut, shape and solder. Tough, too—can't come loose or pull apart.

Coating is Ward Leonard's famous *Vitrohm.* High heat dissipation—withstands thermal shock, vibration and corrosive atmosphere.

Write for AXIOHM Bulletin. WARD LEONARD ELECTRIC Co., 51 South Street, Mount Vernon, N.Y. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls
• RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

For more details circle NED-1646 on enclosed inquiry slip

IN WIRE-MESH PRODUCTS LET JELLIFF DO IT!

For 70 years we've been weaving Wire Mesh. And a good part of that time we have also been making things of Wire Mesh for people who find it is cheaper, easier and generally more satisfactory to "let Jelliff do it."

From big Dipping Baskets to tiny precision filters — from fuel strainers to what-is-it gadgets — JELLIFF's Custom Production Department turns out fabricated Wire-Mesh products at speed, price and precision that mean lower costs and a stronger competitive position for our many customers.

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THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS
LEKTROMESH
RESISTANCE WIRE
WIRE MESH PARTS
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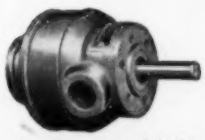
STRAINERS • FILTERS
SOUTHPORT CONNECTICUT

For more details circle NED-1647 on enclosed inquiry slip

headquarters for HP hydraulic pumps

The unique Gerotor principle, found only in Gerotor pumps and fluid motors, increases the efficiency of any hydraulic circuit — in your plant or in your product.

Gerotor is headquarters for hydraulic pumps producing pressures up to 1000 p.s.i. continuous duty—in some sizes, up to 1200 p.s.i. continuous, 1500 intermittent.



GEROTOR

GEROTOR MAY CORP.
P.O. Box 86, Baltimore 3, Maryland

For more details circle NED-1648 on enclosed inquiry slip

See the new Heavy Duty No. 500 Speed Way ½" Speed Drill

- All Ball Bearing.
- Wide-face Helical Gears—precision hobbed from nickel alloy steel.
- Integrally Die Cast Aluminum Body and Frame —all structural and supporting members die-cast-in.
- More Powerful Heavy Duty Motor 5½ Amp. input and ½ H.P. output.
- No. 34B Jacobs Geared Chuck and finest Electrical Equipment.
- Compact, Powerful, Light—weighs only 10 lbs.

WRITE FOR CATALOG

SPEEDWAY MFG. CO.
1892 So. 52nd Avenue, Cicero 50, Illinois

For more details circle NED-1649 on enclosed inquiry slip

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Have You Filled In Your Name and Address?

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To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of desired items. Your request will be forwarded promptly to manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900
901	951	1001	1051	1101	1151	1201	1251	1301	1351	1401	1451	1501	1551	1601	1651	1701	1751	1801	1851	1901
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905	955	1005	1055	1105	1155	1205	1255	1305	1355	1405	1455	1505	1555	1605	1655	1705	1755	1805	1855	1905
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907	957	1007	1057	1107	1157	1207	1257	1307	1357	1407	1457	1507	1557	1607	1657	1707	1757	1807	1857	1907
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928	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828	1878	1928
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945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595	1645	1695	1745	1795	1845	1895	1945
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949	999	1049	1099	1149	1199	1249	1299	1349	1399	1449	1499	1549	1599	1649	1699	1749	1799	1849	1899	1949

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22

NAME ..... TITLE .....

COMPANY ..... Approx. Number of Employees .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
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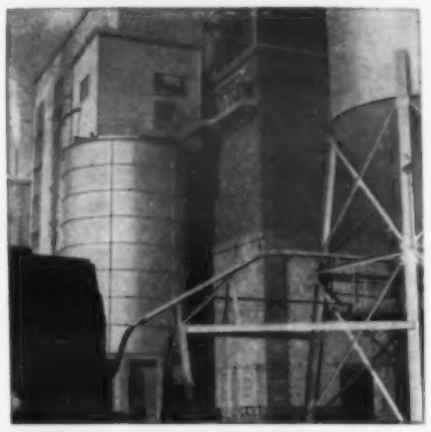

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This pneumatic conveyor offers many concrete savings for conveying dry pulverized, crushed, and granular materials. Reduced purchase price in bulk . . . cost of unloading and storing. Clean, dustless operation, rapid unloading, convenience in storing and reclaiming are just a few of the advantages of this pneumatic conveyor.

If you have a bulk materials-handling problem, may we suggest you allow us to make a study of your conditions. We will be glad to submit our recommendations, based solely on your particular requirements. No obligation, of course. Write for literature on the Airveyor.

FULLER COMPANY, Catasauqua, Pennsylvania
Chicago 3—120 So. LaSalle St.
San Francisco 4—420 Chancery Bldg. A-118

Fuller — DRY MATERIAL CONVEYING SYSTEMS AND COOLERS • COMPRESSORS AND VACUUM PUMPS • FEEDERS AND ASSOCIATED EQUIPMENT

For more details circle NED-1650 on enclosed inquiry slip

ONLY SAFETY BELT HOOKS

have the patented binder bars—are rigidly mounted in double steel strips that hold hooks permanently in alignment, assuring uniform tension across the belt, maximum traction and long belt life. Moreover, these bars protect belts—lap over belt ends, prevent fraying, prevent hooks from pulling out. This better belt lacing comes in 5 sizes. It can be applied with any standard lacer or lacing machine, or, can be applied with an ordinary hammer by using the inexpensive Safety Tu-way Lacer.

Write for Circular

Safety BELT-LACER CO.
5378 N. Menard Ave.
Chicago 30, U. S. A.

For more details circle NED-1651 on enclosed inquiry slip

Protect HYDRAULIC EQUIPMENT WITH HIGH PRESSURE MICRONIC FILTERS

• 3000 p.s.i. Operating Pressure, Micronic Filtration, Low Pressure differential, Compact in Line Type

• Maximum Protection at minimum cost. Replaceable element.

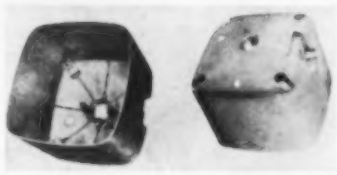
West Coast: H. E. Webb
918 N. Kenilworth Ave., Glendale, Calif.

WATERMAN ENGINEERING Company
725 CUSTER AVENUE
EVANSTON, ILLINOIS

For more details circle NED-1652 on enclosed inquiry slip

New Processes & Materials

HIGH TEMPERATURE DIE STEEL for casting aluminum and zinc



Developed primarily for applications involving die casting of aluminum and zinc, Super Samson high strength die steel can also be used in plastic mold work involving large cavities or elevated temperatures. Providing combination of high strength and resistance to heat and abrasion, steel is 50 to 60 per cent as easy to hob as soft hobbing irons. These properties make possible application of cold hobbing to more jobs. It will harden uniformly in dies with wall thicknesses up to at least 4 in. Photograph shows a very large casting made in hobbed cavity which is about 8 in. square and 5 in. deep. Die steel made by **Carpenter Steel Co.**, 318 W. Bern St., Reading, Pa.

For more details circle NED-1653 on enclosed inquiry slip

WET BLAST ABRASIVES 80 to 2500-mesh abrasives in stock

Now available directly from stock in sizes ranging from 80 to 2500 mesh is complete line of abrasives for wet blasting machines. They are packaged in 50-lb weights for easy charging of machine and storage simplification, and are shipped in corrugated cartons designed to withstand rough handling. Other wet blasting chemicals available include Anarust rust inhibitor and Anaset, an antipacking chemical. Rust inhibitor is liquid which goes in solution immediately and eliminates staining normally expected with inhibited water. Made by **American Wheelabrator & Equipment Corp.**, 508 S. Byrkit St., Mishawaka, Ind.

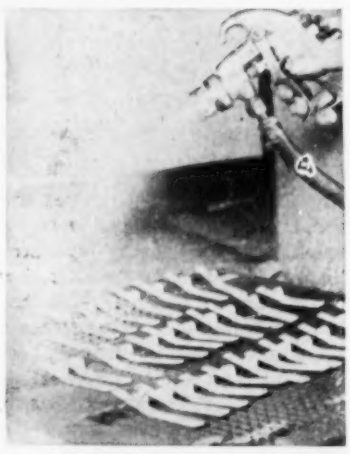
For more details circle NED-1654 on enclosed inquiry slip

LABELING TAPE is pressure-sensitive type

Available in four colors, seven widths and roll lengths of 400 and 800 in., Labelon pressure-sensitive laeling tape can be written upon, and is water, oil and smudgeproof. It is made of two layers of acetate with white waxy substance laminated in between. Writing pressure can be applied by pencil, stylus or other blunt instrument. Typewriter on stencil setting enables typing of labels. Pressure-sensitive adhesive sticks to most hard surfaces. Black, blue, red and green colors are available in ½, ⅝, ¾, 1 and 1½-in. widths. Shorter rolls up to 1 in. wide are supplied with dispensers. Tape over 1 in. wide and all 800-in. rolls are mounted on 3-in. core. In addition to above sizes and colors, 5/16-in. width is offered in red and 2-in. width in blue. Made by **Labelon Tape Co.**, 20 Greenleaf St., Rochester 9, N. Y.

For more details circle NED-1655 on enclosed inquiry slip

METAL WASH PRIMER usable under most types of coatings



Labor saving, high adhesion and anticorrosion metal wash primer based on Vinylite resin can be used under practically all types of coatings. H-400 wash primer requires no oxidation or polymerization, as films are formed by evaporation of solvents. A zinc chromate compound, the wash is designed to provide an adherent base coating on most metals and alloys. Under most climatic conditions it is dry in less than 30 minutes. Although not replacing degreasing or sand blasting (it should be applied to clean surfaces only), compound can replace phosphate treatment. Primer is supplied in two parts for mixing at time of use. Application is by dipping, brush or spray. It meets U. S. Specification MIL-P-15328. Made by **Vorac Co.**, Dept. 2F, 162 E. 38th St., New York 16, N. Y.

For more details circle NED-1656 on enclosed inquiry slip

C-D-F makes all three!
low cost Spiral-wound Tubes

• Want stiff, sturdy, crush resistant tubing? Want low cost insulation for coil bodies and structural spacers?

C-D-F, experts in insulation, makes spiral-wound tubes by the mile . . . gives you dependable tubes with prompt deliveries.

Write for samples of these round, square, rectangular tubes today. We will rush them, along with complete electrical and mechanical specifications *and* the name of your nearest C-D-F sales engineer. Find out . . . write now . . . for C-D-F spiral-wound tubing!

Continental-Diamond Fibre Company
NEWARK 30, DELAWARE

For more details circle NED-1657 on enclosed inquiry slip

Hanna Valves

. . . *for*

Exacting Cylinder Control

¼" UNITITE

For light piping and tubing . . . control air, oil or water pressures up to 500 psi.

UNITITE

3-Way or 4-Way valves . . . quick-acting, packless . . . for pressures to 250 psi, in three mounting styles.

PILOT VALVES

3-Way . . . for direct control of small cylinders, automatic control of large cylinders as pilot for "Mastair."

FOOT OPERATED

Either single or double pedal . . . for pressures to 250 psi . . . provides quick, effortless control.

SOLENOID

New 4-Way valve . . . small, compact, low current consumption . . . adaptable to straight line piping.

"FLO-SET"

Provide for independent speed adjustment of forward and reverse cylinder piston stroke. Flo-Set Valves available in ¼", ⅜" and ½" for air, oil or water control.

You are assured of long, trouble-free service with Hanna Valves, known throughout industry for their practical design and precision construction. Regardless of your control problem, get complete information on Hanna valves. Our new catalog will give you full details.

Send for NEW CATALOG 254

It gives full information on Hanna's complete Valve line. Write for your copy today.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1759 Elston Avenue, Chicago 22, Illinois

For more details circle NED-1658 on enclosed inquiry slip

AUTOMATIC PROTECTION OR CONTROL for your heating process

...WITH

ALNOR PYROTAC

Here's a simple, low-cost way to obtain *AUTOMATIC PROTECTION* against damage due to excessive temperatures . . . safeguard your investment in heating equipment and materials in process. This precision-built instrument constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the heated circuit at a safe, pre-set temperature. It may also be used as a *CONTROLLER* on a process requiring shutdown upon reaching a final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures safety if couple or extension wires should break.

Ask your Alnor representative for details on this sturdy, precise instrument. You'll find the price of less than a hundred dollars unusual for an instrument of this type. Write for bulletin that contains complete description and wiring diagrams of actual applications. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-1660 on enclosed inquiry slip

THIS increases the cost of making your product

Mono-Cushions cut the cost of Bumps

MONO-CUSHIONS SAVE YOU MONEY by giving load, vehicle, and driver an easy ride. These big burly tires fairly soak up bumps and shock, reduce maintenance as much as 40% on bearings, steering assemblies, driving trains, and any part of the vehicle affected by shock or shock load. They reduce load breakage, and they're easy on floors.

Mono-Cushions are easy on drivers, too—handle beautifully, ride smoothly, reduce fatigue. They're sure-footed, stable on high lifts and short turns.

YOUR BEST SOURCE for replacement tires is through the manufacturer of your equipment, who can supply you through his distributors with Monarch Tires engineered for your application.

THE MONARCH RUBBER COMPANY
200 LINCOLN PARK, HARTVILLE, OHIO

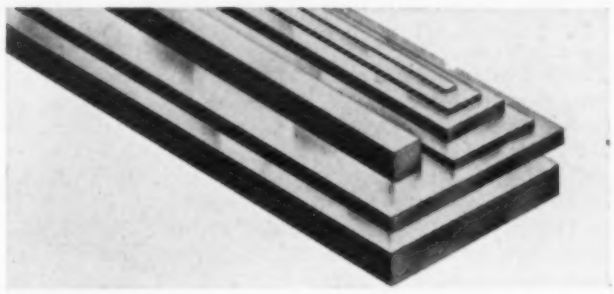
SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

For more details circle NED-1661 on enclosed inquiry slip

New Processes & Materials

AIR HARDENING DIE STEEL
nondeforming type is flat ground

Long lasting punches and dies can be produced from air hardening type of flat ground die steel. It has 5 per cent chrome content for wear resistance and is also usable



for making gages and tools. It has hardening range of 1700 to 1800° F and is spheroidize annealed for good machinability and uniform hardenability. Steel is furnished in 43 standard stock sizes from ½ x 2 in. to 2 x 10 in. in 36-in. lengths. All sizes are accurately ground to size with surface finish of 25 to 35 microinches. Edges are parallel and square with flats. All sizes are individually packaged, protected from rusting or scratching, with dimensions and heat-treating instructions on wrapper. Made by **Simonds Saw & Steel Co.**, 470 Main St., Fitchburg, Mass.

For more details circle NED-1662 on enclosed inquiry slip

WELDING ELECTRODE
for cast iron is nickel-free

Suitable for maintenance, salvage and repair work, Eutec-Trode 27 electrode is free of critical nickel. It offers high tensile weld with uniform amount of carbon in the deposit. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

For more details circle NED-1663 on enclosed inquiry slip

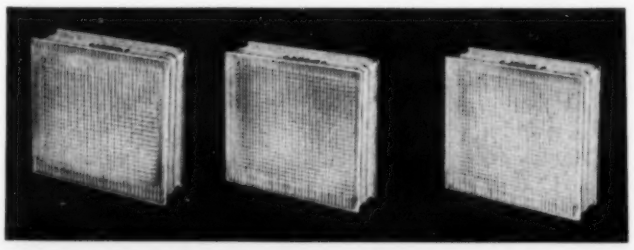
BURN SPRAY
relieves pain from burns and wounds

Packaged in Aerosol type container, Americaine automatic spray topical anesthetic affords relief for burns and wounds. Usable in first aid rooms, dispensaries and first aid field kits, spray is reported to provide relief up to 6 or 8 hours. Liquid contains 20 per cent dissolved benzocaine, plus oxyquinoline antiseptic agent to help prevent infection, in a bland water-soluble base. Each spray dispenser contains 4 oz of liquid and 7 oz of inert propellent. Made by **Americaine, Inc.**, 1316 Sherman Ave., Evanston, Ill.

For more details circle NED-1664 on enclosed inquiry slip

PATTERNED GLASS BLOCKS
three 12-in. types are designed to control light in seeing areas

Added to line of five 8-in. 55 Line functional glass blocks for light control in critical seeing areas, three new patterns of 12-in. modular dimension blocks are classified as



Big 3. Advantages offered include a new architectural scale, orientation keyed design to give 30 per cent higher brightness for north exposures and 20 per cent lower brightness on sunny walls, double cavity design for low heat gain in summer and heating economy in winter, Spread-Lens face corrugations for wide azimuth daylight acceptance, easily cleaned face finish for maintenance economy and ability to be combined with 8-in. blocks for functional patterns are features.

Shown, left to right, are Prism A 55 light directing glass block for highest light transmission in nonsun elevations, Soft-Light Prism B 55 LX light-directing type for use in sun elevations and which offers brightness control and reduced heat gain, and Essex Soft-Light B 55 LX light diffusing block for use in stairwells and other areas where well-diffused light is required. Made by **Pittsburgh Corning Corp.**, Dept. 12-NED, 307 Fourth Ave., Pittsburgh 22, Pa.

For more details circle NED-1665 on enclosed inquiry slip

WILLSON Safety Goggles

Keep You on the Safe Side

Style TAW50 for heavy duty with
- WILLSON Super-Tough® lenses
- Comfort-fitting eye cups
- Adjustable chain bridge
- Side screen ventilation
- Lenses easily replaceable

More than 300 other Eye and Respiratory Safety Devices carry this trademark

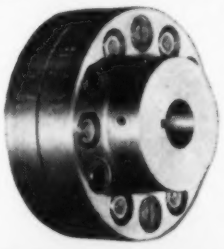
WILLSON® Dependable Products Since 1870

WILLSON PRODUCTS, INC., 219 Washington St., Reading, Pa.

For more details circle NED-1666 on enclosed inquiry slip

AJAX KNOWS COUPLINGS

● Use of Neoprene Bushings combine Ajax resilient yet positive drive with the chemical resisting characteristics of Neoprene. They help processing plants in chemical, petroleum and similar industries reduce downtime. Ajax Flexible Couplings have been regarded as THE STANDARD for 30 years.



Write for Bulletin 48

AJAX FLEXIBLE COUPLING CO. INC.
WESTFIELD, N. Y.

For more details circle NED-1667 on enclosed inquiry slip

GET IN THE SCRAP

Send for this new booklet—it tells how you can help out in the emergency facing the nation.

Many thousands of manufacturing plants now face serious shortages of steel and products made of steel.

Unless the steel mills and foundries get more *scrap* iron and steel, it will be impossible to meet current demands for both military and civilian production.

You have the needed scrap—in the form of "idle" iron and steel: obsolete machinery, no-longer-usable jigs and fixtures, chain, gears, pulleys, pipe, etc.

Set up a Scrap Salvage Program in your plant* and help keep the steel coming! Non-ferrous scrap is needed, too!

SCRAPPY SAYS: AID DEFENSE MORE SCRAP TODAY... MORE STEEL TOMORROW

*For copy of "how-to-do-it" booklet, address Advertising Council, 25 W. 45 St., New York 19, N. Y.

NEW EQUIPMENT DIGEST

For more details circle NED-1668 on enclosed inquiry slip

Standard models available in capacities from 200 lbs. x 6" wide to 15,000 lbs. x 48" wide.

IS YOUR SHOP CROWDED?

ROWE "Easy Load" AUTOMATIC

COIL CRADLES

Designed to use an absolute minimum of floor space in handling coils to your press operation.

★4 Power-driven rolls and instant width adjustment. ★Write today for literature and name of nearest distributor.

ROWE MACHINERY & MANUFACTURING CO., INC.
1506 N. INDUSTRIAL BLVD., DALLAS, TEXAS

For more details circle NED-1669 on enclosed inquiry slip

Commander TAPPER

★ Wider Range...1 Tapper Handles #0 to 3/4" Taps

★ Automatic Tap Protection

★ Furnished to fit any Drill Press

Commander—"The Tapper That Thinks For Its Operator," has the adjustable full range torque control that instantly stops any tap when it becomes dull, loaded, strikes a hard spot or bottoms in blind hole tapping. Assures maximum tap protection, higher production, even with inexperienced operators.

Your nearby Commander Distributor can give you a demonstration in your own plant. Write for his name and a copy of the NEW Commander Full Line Catalog #851

COMMANDER MFG. CO.
4220 W. Kinzie St. Chicago 24, Ill.

Product of Commander... Builder of Production Tools

For more details circle NED-1670 on enclosed inquiry slip

AO Announces

"PLASTOLITE" PLASTIC LENSES

Identical with glass in Optical Properties...

FAR LIGHTER IN WEIGHT!

Here's the quality eye protection in *plastic* lenses you've been looking for. Made in the world's cleanest rooms—lint-free and dust-free! Available as 6 curve lenses in all eye sizes on your favorite AO safety goggle. Ideal for electronics work, spot welding, many other uses. Ask your nearest AO Safety Products Representative.

American Optical COMPANY
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASS. • BRANCHES IN PRINCIPAL CITIES

For more details circle NED-1671 on enclosed inquiry slip

New Literature and Catalogs

Compressors, Generators & Tools

Wellworth Trading Co.—Line of generators with various capacities, compressors, paint spraying outfits, gasoline motors, air line fittings, portable electric hand saws and drills, blowers, woodworking tools, welders and motors are listed in 36-page illustrated catalog No. 152.

For more details circle NED-1672 on enclosed inquiry slip

Space Heaters

Fageol Heat Machine Co.—Principle of spraying heated air out at floor level to form blanket of warm air in working area where it is needed is explained in 6-page illustrated bulletin L-4782 on Fageol heat machines. Portable oil-burning machines of 140,000 and 160,000 Btu outputs are described and their dimensions and specifications given. Several applications are shown.

For more details circle NED-1673 on enclosed inquiry slip

High Cycle Electric Tools

Rotor Tool Co.—Of interest to users or potential users of 180 and 360-cycle electric tools is 12-page illustrated bulletin No. 39 "Keep 'Em Working." Maintenance, application and safety comments apply to all makes of high cycle tools. Features and components are described in detail.

For more details circle NED-1674 on enclosed inquiry slip

Rotating & Nonrotating Cylinders

Logansport Machine Co.—22-page illustrated catalog No. 200 section 3 outlines construction features and discusses various mountings for 750 series nonrotating and rotating hydraulic cylinders. Complete specifications, photographs and dimensional drawings are included.

For more details circle NED-1675 on enclosed inquiry slip

Filter Presses

T. Shriver & Co.—32-page illustrated booklet No. 52 outlines advantages and features of pressure filtering equipment for processing fluids at higher speeds. Factors to be considered in selection of filter presses, various types of equipment, how the equipment functions and application data are detailed.

For more details circle NED-1676 on enclosed inquiry slip

Industrial Truck Battery Chargers

Motor Generator Corp.—Fundamental principles and theory of operation of motor generator charging sets for charging all types of Edison and lead batteries is subject of 6-page folder J-4594. Photographs show application of equipment to batteries used in motorized hand and driver-ride electric trucks.

For more details circle NED-1677 on enclosed inquiry slip

Measuring & Testing Equipment

General Electric Co.—80-page catalog GEC-1016 summarizes all of company's testing and measuring equipment for laboratory and production line use. Compiled primarily as a reference to available apparatus, catalog contains over 150 photos and diagrams, and covers uses, features, specifications and prices of more than 130 items.

For more details circle NED-1678 on enclosed inquiry slip

JABSCO SELF PRIMING PUMPS

Patented and Patents Pending

the pump with the DUPONT NEOPRENE impeller (oil resistant)

BRONZE, STAINLESS STEEL & IRON CONSTRUCTION —CAPACITY TO 50 GALLONS PER MINUTE

1 MORE CAPACITY—for its weight, size and price.
2 SELF-PRIMING—starts instantly with high suction lift.
3 ONE MOVING PART—tough, long-lived.
4 GEARLESS—impeller outlasts metal gears.
5 TROUBLE FREE—simple construction.
6 ECONOMICAL—low cost—low maintenance.

LIQUID TRANSFER AND CIRCULATING FOR ALL INDUSTRIES

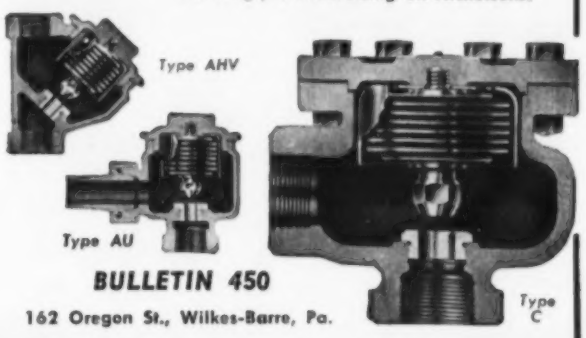
JABSCO PUMP COMPANY
2031 N. Lincoln Street • Burbank, California

For more details circle NED-1679 on enclosed inquiry slip

NICHOLSON STEAM TRAPS

DOUBLE CAPACITY OF THESE DRYERS

That the higher, steadier heat effected by Nicholson thermostatic traps makes them ideal for drying operations was again demonstrated by a large textile mill. Replacing mechanical traps on 20 drying cans, Nicholsons doubled their capacity, tho operating on 16 lbs. pressure against 20 previously. 5 types for every use; size 1/4" to 2"; press. to 225 lbs. See why leading plants are increasingly standardizing on Nicholsons.



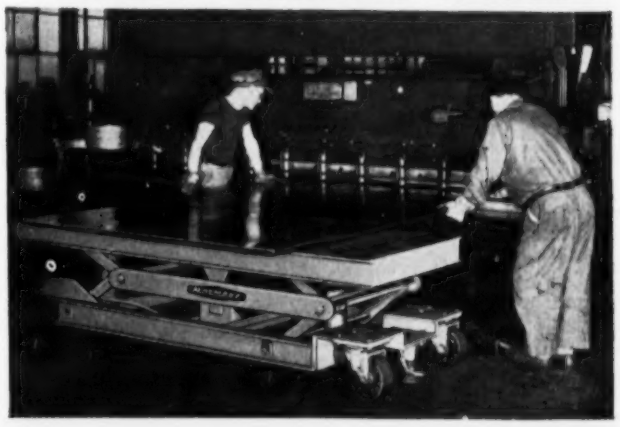
BULLETIN 450
162 Oregon St., Wilkes-Barre, Pa.

W. H. NICHOLSON & CO.
TRAPS · VALVES · FLOATS

For more details circle NED-1680 on enclosed inquiry slip

FEED SHEETS FASTER

at presses
cutting machines
forming equipment
with
RAYMOND
Hydraulic SHEET FEEDING TABLES



NOW—there's no need to waste work-time on unnecessary handling with RAYMOND Hydraulic Sheet Feeding Tables! These tables step up feeding — banish lifting, tugging, stooping. Here's what they can do in your plant:

LIGHTEN WORK — Hydraulic foot pump or electric-driven power pump raises table, pedals lower it—operator is no longer fatigued from heavy lifting.

SPEED FEEDING — Top sheet is always at correct feeding level—operator merely slides it into position. Result: Feeding becomes faster, more accurate!

CUT HANDLING COSTS — Table can be loaded in storage area—moved to machine on easy-rolling wheels. Useful for die transferring. Has towing eyes for hauling.

FREE BULLETIN Send today for Bulletin 206, showing the complete line of RAYMOND Hydraulic Sheet Feeding Tables — in models from 2,000 to 20,000 lb. capacities and with flat or tilting tops.

RAYMOND

ELECTRIC INDUSTRIAL TRUCKS • HYDRAULIC ELEVATING EQUIPMENT

The RAYMOND CORPORATION
4167 Madison St., Greene, N.Y.

For more details circle NED-1681 on enclosed inquiry slip

POTDEVIN COATING MACHINES

60 years of dependable service

Illustrated is Model 46R for applying various types of coating materials.

There is a POTDEVIN for a tremendous variety of coating jobs . . . from 6 inch wide label pasters to large 46 inch coating machines for mass production. Wider machines available for sheet or roll coating.

Such coating materials as hot or cold glues, latex, resins, paint, varnish and lacquer, as well as many of the new type coating materials work with equal efficiency. The amount of coating is accurately controlled. No skilled help needed to operate a POTDEVIN. Write for full particulars. Our engineers are always ready to help you solve any coating problem.

POTDEVIN MACHINE CO.
1272 38th St., Brooklyn 18, N.Y.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

For more details circle NED-1682 on enclosed inquiry slip

KESTER FLUX

62 Types Available

THE PROPER FLUX for the Job

Using the proper flux for the job will greatly increase soldering efficiency. Contact Kester's Technical Department on any flux problem. There is no obligation.

Salts and paste available in 1, 5, 10, and 50 pound containers.

Free—Technical Manual, "Solder and Soldering Technique"

KESTER SOLDER

KESTER SOLDER COMPANY
4449 Wrightwood Avenue
Chicago 39, Illinois

Factories Also At Newark, New Jersey • Brantford, Canada

For more details circle NED-1683 on enclosed inquiry slip

ON DOMESTIC PRODUCTION ON DEFENSE PRODUCTION

this Bulletin will help you *speed up* production

BULLETIN 20 gives full details about EASY-FLO and SIL-FOS, the low-temperature silver brazing alloys, and why and how they enable you to turn out strong, leakproof metal joints at amazing production rates and with push-button simplicity. It is also packed with useful information about joint designing and fast brazing methods.

WRITE FOR A COPY—TODAY

HANDY & HARMAN 82 Fulton St., New York 38, N. Y.

Agents in Principal Cities. In Canada: HANDY & HARMAN of Canada, Ltd., Toronto

For more details circle NED-1684 on enclosed inquiry slip

New Literature & Catalogs

Straight & Extension Ladders

Duraluminum Mfg. Co.—Safety features of Life-Time straight and extension aluminum alloy ladders are described and illustrated in 6-page folder. Also included are weights for extension ladders from 18 to 50 ft and straight ladders from 6 to 25 ft.

For more details circle NED-1685 on enclosed inquiry slip

Vapor & Liquid Relief Valves

Kunkle Valve Co.—Illustrations and brief descriptions of air, gas, steam and liquid relief valves for original equipment applications are included in 4-page bulletin. Units are made of bronze, brass, stainless steel and cast iron.

For more details circle NED-1686 on enclosed inquiry slip

How To Use Shears

Beverly Shear Mfg. Co.—"How To Use Your New Beverly" is title of 8-page illustrated bulletin No. IC-1051. Included are operating details for throatless and slitting shears, cable cutter and inside slotter. Blade sharpening service is outlined as well.

For more details circle NED-1687 on enclosed inquiry slip

Fan Standards

Propeller Fan Manufacturers' Association—"The Story of Testing Fans" is title of 4-page brochure which outlines methods for testing ventilating, exhaust and buzz fans and air circulators. Photographs and drawings are included, along with comparative test results under NAFM-ASHVE and NEMA tests.

For more details circle NED-1688 on enclosed inquiry slip

Maintenance & Building Products

Flintkote Co., Industrial Products Div.—Protective coatings, flooring binders and cements, underlayments for decorative floors, sound deadener and insulating compounds, sealers for concrete pavement joints, sizes and laminants for fiberboard and many other products are described in 24-page pocket-size illustrated booklet "Flintkote Industrial Products Digest." Essential characteristics and applications of these products are tabulated.

For more details circle NED-1689 on enclosed inquiry slip

Materials Handling Baskets

Hoffman Co.—Applicable for manufacturing, parts finishing, processing and food industries, several types and sizes of metal baskets, dippers, strainers and containers for simplified materials handling are listed in 6-page illustrated bulletin and supplementary price list.

For more details circle NED-1690 on enclosed inquiry slip

Collet Chucks

Sutton Tool Co.—"Get a Better Grip on Production" is title of 8-page illustrated bulletin which explains operation, sizes, accessories and applications of Levermatic and Handmatic collet chucks. These tools provide instant internal and external gripping and releasing for accurate machining on spindle type machine tools.

For more details circle NED-1691 on enclosed inquiry slip

Production Control Systems

Remington Rand Inc.—56-page illustrated manual X-1268 is entitled "Production Control Systems and Procedures." It details unique method of materials control that results in shorter production cycle while speeding production through elimination of varied delays. Typical forms and procedure charts outline engineering procedures, planning and progress, machine loads, material and tool procurement and control. Typical case study reviews installation that has been in successful operation for several years.

For more details circle NED-1692 on enclosed inquiry slip

Shipping Aids

"How to Save on Handling Costs & Cut Damage Loss" is 32-page illustrated practical guide to materials handling using expendable corrugated board pallets. It deals specifically with shipment of knock-down corrugated box products. Price is $2.50 from Addison-Semmes Corp., 1800 Thurston Ave., Racine, Wis.

For more details circle NED-1693 on enclosed inquiry slip

Centralized Lubrication Systems

Lincoln Engineering Co.—24-page illustrated catalog 80 contains full information on line of lubricant application equipment and centralized lubrication systems. Selection charts aid in specifying proper equipment to use in metal processing, metalworking, textile, mining, food processing, printing and paper, chemical processing and construction fields.

For more details circle NED-1694 on enclosed inquiry slip

Contour Machining

DoALL Co.—Details of machines and machining techniques, tables of sawing and filing rates on representative metals of varying thicknesses, typical industrial applications, accessory and tool selection data, and specifications of various machines are included in 16-page illustrated bulletin 51-705 on contour machines for sawing, filing, polishing and similar operations.

For more details circle NED-1695 on enclosed inquiry slip

Chem-Board Tote Boxes

HELP BUILD AIRCRAFT

Many plants building the planes needed to make the nation strong keep materials, parts and sub-assemblies flowing to production lines in thousands of Convoy Chem-Board Tote Boxes. The nesting boxes illustrated are stored in minimum space while awaiting new loads.

Chem-Board is made of corrugated fibre-board, chemically impregnated by Convoy's exclusive process. It is flint hard and rock strong. It is not weakened by moisture. It is impervious to machine oils. Convoy Tote Boxes cost and weigh 50% to 60% less than steel.

The lightness, toughness and economy of Chem-Board Tote Boxes are unmatched. Tell us the style you use . . . we'll send a free production sample from the next run for you to test. As a guide for present and future availability, our current production capacity is reserved for the unprecedented demands from old customers and "DO" orders. Orders rated DO-MRO are acceptable. Write today.

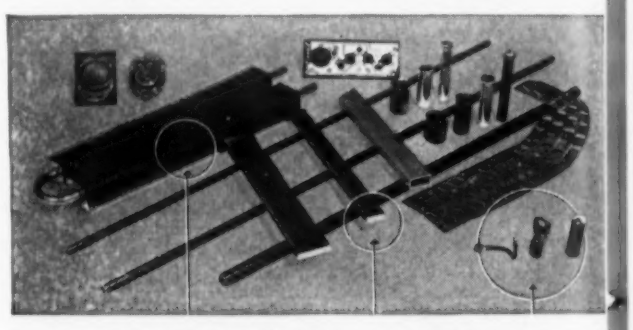
Standard and Custom-made Nesting—Stacking—Vertical CHEM-BOARD TOTE BOXES

CONVOY, INC.
P.O. Station B, Box 216-N
CANTON 6, OHIO

For more details circle NED-1696 on enclosed inquiry slip

General Plate Alcuplate®
(COPPER-CLAD ALUMINUM)

Does The Work of Solid Copper . . . Helps Conserve Critical Copper



Typical Applications of Alcuplate

General Plate Alcuplate (copper-clad aluminum) provides a practical solution for conserving or extending your copper allotment.

Made by permanently bonding a thin layer of critical copper to thicker, more readily available aluminum, Alcuplate has practically the same physical and electrical properties as copper plus the light weight of aluminum.

Alcuplate can be fabricated by stamping, drawing or forming. Its malleability permits its use in the manufacture of many parts from work-hardened rather than annealed or dead soft materials. The copper surface permits soft soldering.

Alcuplate is widely used in the electrical field for terminals, clips, bushings, shims and high frequency application such as wave guides. It may also be used for heat transfer assemblies, fin and tube type radiators, printed circuits, badges, costume jewelry, etc.

General Plate Alcuplate is available in sheet and strip clad on one or both sides, 8" wide in thicknesses ⅛" and under. Tubing and wire are also available in limited sizes.

GENERAL PLATE
Division of Metals & Controls Corporation
82 FOREST STREET
ATTLEBORO, MASS.

For more details circle NED-1697 on enclosed inquiry slip

Multiple-Use, RUBBER-CUSHIONED

Brightboy ABRASIVES widening production applications

- *Results show time savings up to 50%; burring, finishing, cleaning, polishing, in one operation.*
- *Application versatility widened in working all metals, plastics, laminated materials, wood, glass.*
- *Manufacturers of defense and civilian-use products, parts and assemblies benefit from new methods and applications.*

SAVES TIME: Bridges the gap between the rough grind and the buff. Works to close tolerances; can be shaped to contour. Produces a wide variety of conventional and special finishes and patterns; frequently the final polish. Requires no before-use preparation or dressing; no skilled labor to handle it.

SOME GENERAL USES: Removing light digs, tool and heat marks. Cleaning welded and soldered joints. Finishing dies and molds. Burring and finishing stampings, castings, machined and molded parts.

Ask your dealer about Brightboy. Write the Brightboy Service Department on any problems where light finishing and precision surfacing methods and production are involved.

WELDON ROBERTS Brightboy

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
NEWARK 7 N. J.

America's Pioneer Manufacturers of Rubber-Bonded Abrasives

For more details circle NED-1698 on enclosed inquiry slip

NEW Clarin TABLET ARM CHAIR that FOLDS - Is Adapted for Multiple Uses

It is destined to make its mark as one of the most useful adjuncts to portable seating ever devised.

This FOLDING TABLET ARM CHAIR is just the thing for—
SALES CONFERENCES
DEPARTMENTAL MEETINGS
GROUP DISCUSSIONS
LECTURES
TAKING MINUTES, NOTES, DICTATION, etc.

The arm is an integral part of the chair—NOT AN ATTACHMENT. It may be adjusted to several positions—
1) Raised upright to permit free ingress and egress.
2) Completely lowered to the side.
3) Folded flat against the seat for compact storage.

The Only Tablet Arm Chair of its kind anywhere.

Doubly Reinforced Steel Frame with Plywood Seat and Solid Wood Arm. Available with Seat only, or Seat and Back upholstered. Rubber Feet prevent noise and marring.

Folds to 3" thin.

Write today for folder, prices and delivery.

CLARIN MFG. COMPANY
4640 West Harrison Street, Dept. 15, CHICAGO 44, ILL.

For more details circle NED-1699 on enclosed inquiry slip

ACTIVOL ACTIVATES ACIDS
Speeds Pickling Cycle
Assures Maximum Drain-off
Makes Rinsing Easy

0.1% of ACTIVOL on the weight of the acid solution added to your pickling bath will *activate* your acid to produce results heretofore never achieved. Acid action on oxide scale is accelerated yet leaves the metal smooth and clean and free of pits. The acid drains back into the bath as metals are removed from the pickle so quickly and completely that savings in acid consumption as high as 40% are possible in many cases. Rinsing is simplified and improved through the elimination of much of the costly carry over formerly a problem.

ACTIVOL is outstanding for such applications as pickling, anodizing, galvanizing, plating, wire drawing, bonderizing, etc.

WRITE FOR DETAILS:

Haas MILLER Corp.
4th & BRISTOL STS. • PHILA. 40, PA.

For more details circle NED-1700 on enclosed inquiry slip

how to design for light weight and extra sales appeal

Here's one good way to hold down the weight of products you're designing—replace a heavy casting or forging with a Hackney Deep Drawn Shape or Shell. Lightweight Hackney parts not only save weight—they often eliminate costly welding and machining operations as well. And they give your products extra sales appeal, too, through greater strength and durability, smart appearance and lower costs.

Ask Hackney engineers to help you with your design problems. They're backed by our 50 years of specialized experience in cold drawing. Write us today for additional information.

PRESSED STEEL TANK COMPANY
Manufacturer of Hackney Products
1450 S. 66th St., Milwaukee 14
1324 Vanderbilt Concourse Bldg., New York 17
255 Hanna Bldg., Cleveland 15
936 W. Peachtree St., N.W., Room 136, Atlanta 3
208 S. LaSalle St., Room 779, Chicago 4
578 Roosevelt Bldg., Los Angeles 14

Hackney

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-1701 on enclosed inquiry slip

New Literature & Catalogs

Controlled Materials Plan

Diebold Inc.—"C.M.P. Made Easy" is portfolio of folders on this plan and deals specifically with record keeping and record preservation equipment. Two 6-page illustrated folders tell what the Controlled Materials Plan is and how to file under it, and tabulate the basic records required under C.M.P.

For more details circle NED-1702 on enclosed inquiry slip

Electric Industrial Trucks

Raymond Corp.—Pallet stacking electric trucks with and without telescoping masts in capacities of 2000 and 3000 lb, two models of low-lift rider type trucks for handling skid platforms or pallets, and other machines for stacking skids and pallets are covered in 4-page illustrated bulletin 703.

For more details circle NED-1703 on enclosed inquiry slip

Metals Cutting Technique

Gulf Oil Co.—Hi-Jet, revolutionary development that increases high-speed tool life 6 to 12 times, carbide tool life 3 to 5 times and cutting speeds up to 100 per cent, is subject of 12-page bulletin AD-5781. System employs high-velocity jet of new Hi-Jet oil directed from underneath single point tool directly to cutting edge. Surface finish is improved.

For more details circle NED-1704 on enclosed inquiry slip

Electric Plugs & Receptacles

Pyle-National Co.—Triploc automatic locking and manual release industrial plugs and receptacles are subject of 4-page illustrated bulletin 603. Offered in one to eight-pole contact units, line permits thousands of plug and receptacle combinations. They are usable for detachable power, lighting, remote control, instrumentation, communication and sound systems.

For more details circle NED-1705 on enclosed inquiry slip

Automatic Weighing Machinery

Richardson Scale Co.—Speed, materials handled, capacity, accuracy, features and accessories of automatic weighing machinery are tabulated in 4-page illustrated bulletin 0151.

For more details circle NED-1706 on enclosed inquiry slip

Gas Burners

C. M. Kemp Mfg. Co.—28-page illustrated catalog B-11 is entitled "Kemp Combustion Equipment." Operating principle of the Kemp industrial carburetor is explained. Standard burner data includes information on seven types of burners, lighters and tips, soldering irons, hand torches, fire pots, peep hole covers, observation ports, controls and fire checks.

For more details circle NED-1707 on enclosed inquiry slip

Industrial Instruments & Controls

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—28-page illustrated catalog 5000 describes principal instruments, control devices and related components made by company. Data are given on pyrometers, potentiometers, flow and liquid level meters, thermometers, pressure gages, diaphragm motor operators, motorized valve assemblies, control valves, panelboards and instruments.

For more details circle NED-1708 on enclosed inquiry slip

NEW FEATURES... greater efficiency
more economy in—
BUDA 2000 lb. FORK TRUCKS!

Look at the new Buda 2000 lb. capacity fork-lift trucks . . . compare them with any other . . . and you'll see why the new Budas are the big demand trucks today. For fast handling, operating economy and low maintenance—you can't beat them! See your nearby Buda Distributor today.

ENGINE and **HYDRAULIC SYSTEM** are completely accessible for servicing.
EASY OPERATING CONTROLS—two speeds forward—two speeds reverse operated by one lever.
Quick change heavy duty **CLUTCH.**
EXTRA STRENGTH, self-aligning Mast. Replaceable bronze wear strips.
CENTER POINT STEERING provides for equal turning both ways. Pivot type axle with spring cushioned stabilizer
CARRIAGE mounted on rollers with patented adjustable side thrust rollers, eliminating wear.
Full Front Vision **INSTRUMENT PANEL** with full complement of gauges and switches.
SAFE GASOLINE TANK located outside engine compartment and equipped with Protectoseal cap.

BH-34

Write for Bulletins and Specifications today.
The Buda Company, Harvey, Ill.

BUDA

Manufacturers of Diesel Engines, Maintenance of Way Products, Jacks, Earth Drills and Material Handling Equipment

For more details circle NED-1709 on enclosed inquiry slip

A. TYPE J6
B. TYPE H12
C. TYPE J98

A WEATHERPROOF, SHOCK-RESISTANT PRESSURE VACUUM CONTROL

The Type J6 pressure and vacuum control is the basic unit of the three models shown. It is a sensitive precision built unit with weatherproof and shock-resistant features, thus may be used in exposed places on moving equipment. The J6 is for use on pressure vacuum applications requiring very close on-off differentials.

The Types shown include the J6 covered by bulletin #5-3, the H12, with external calibrated adjustment covered by bulletin #5-2 and the J98 with explosion-proof housing covered by bulletin #5-4.

Write for the bulletin you desire.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

For more details circle NED-1710 on enclosed inquiry slip

Standardize on

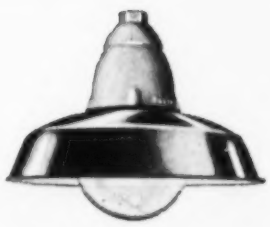
R&S INDUSTRIAL LIGHTING FIXTURES

...3 Complete Lines meet every safety lighting need!

DUST-TIGHT

CLASS II, GROUPS E, F & G AND CLASS III

For hazardous locations where flammable or explosive dusts are present. Streamlined design prevents dangerous accumulation of dust particles. Two exclusive design features facilitate easy cleaning and relamping. Standard pendent and junction box bases accommodate any style of fixture—globe—assembly interchangeably in either 100 Watt or 200 Watt sizes.



WRITE FOR DATA SHEET No. 7151-15

EXPLOSION-PROOF

CLASS I, GROUPS C & D

For greater safety in hazardous locations wherever flammable materials are made or used. A complete line is available in pendent, ceiling, bracket and hand types—from 100 Watts through 500 Watt sizes. Standard conduit bases permit interchangeability of reflector globe assemblies.

WRITE FOR CATALOG No. H-47-15

VAPORTIGHT

For efficient illumination and maximum indoor and outdoor protection against non-inflammable gases, vapors, dusts and moisture. A complete line available in pendent, ceiling and bracket types from 15 Watts through 500 Watt sizes. Bases remain vaportight when globes are removed or broken in service.

WRITE FOR CATALOG No. 9048-15

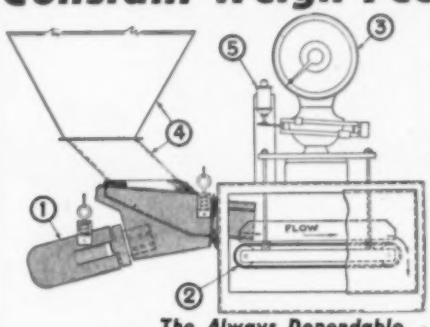
R & S also make a complete line of marine fixtures and fittings

RUSSELL & STOLL COMPANY, INC.
125 BARCLAY STREET, NEW YORK 7, N.Y. C9

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

For more details circle NED-1711 on enclosed inquiry slip

For Really Accurate Constant Weigh Feeding!



The Always Dependable
SYNTRON
GRAVIMETRIC FEEDERS

—with their purely "ELECTRONIC" instantaneous correction of even the slightest variation in weight in the flow of bulk material, offer accuracies far beyond those possible with mechanically controlled equipment.

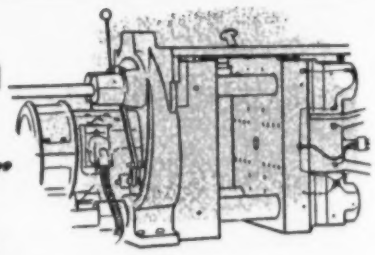
Small sizes for weigh feeding chemical reagents—up to huge models for hundreds of tons per hour of ore, coal, limestone, etc.

Write for brochure on Weigh Feeding

SYNTRON CO.
405 Lexington Ave. Homer City, Pa.

For more details circle NED-1712 on enclosed inquiry slip

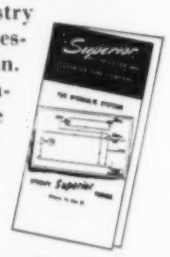
When the Pressure's On ...Specify Superior Tubing



Whenever there's a tough job for fine small tubing to do, Superior is the tube to specify.

An example is found in hydraulic applications for which Superior's technology in tubing produces seamless steel tubing to meet all Joint Industry Conference Hydraulic Standards for all pressure ranges from 0 to above 3,000 lbs./sq. in.

For complete information and specifications on Superior Hydraulic Tubing write today for Bulletin 38. For general information on Superior production ask for Bulletin 32. Address Superior Tube Company, 2018 Germantown Ave., Norristown, Pennsylvania.



Superior
THE BIG NAME IN SMALL TUBING

West Coast: Pacific Tube Company
All analyses .010" to 5/8" O.D.
Certain analyses (.035" max. wall) up to 1 3/8" O.D.
5710 Smithway St., Los Angeles 22, Calif. . . . ANgelus 2-2151

For more details circle NED-1713 on enclosed inquiry slip

Know These Facts About SAVINGS on SLOW-SPEED DRIVES?

1. Know that you can select a drive to give you any speed from 11 to 154 r.p.m. direct from distributors' stocks saving design and engineering costs?

2. Know that there is a slow-speed drive available that costs very little initially and almost nothing to maintain?

3. Know that there is a standard speed reduction unit available that will give you higher production, less down-time and positive protection against overload damage?

4. Want to know more about it?

Get the story on American Speed Reduction Drives in a hurry—clip and mail the coupon below to:

THE AMERICAN PULLEY COMPANY
4294 Wissahickon Ave., Philadelphia 29, Penna.
Gentlemen:
I have a slow-speed problem—these facts I want RIGHT AWAY—
Please rush your bulletin on American Speed Reducers to:
NAME_____
ADDRESS_____
CITY_____ZONE_____STATE_____

For more details circle NED-1714 on enclosed inquiry slip

New Literature & Catalogs

Adjustable Port Valves

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—Use of Honeywell Air-O-Motor diaphragm operators with North American adjustable port valves is covered in 12-page illustrated catalog No. 1800. Specification data for gas, air, oil, steam and water regulation valves are given, as are mounting dimensions, material specifications, maximum pressures and ordering information.

For more details circle NED-1715 on enclosed inquiry slip

Abrasive Belt & Wheel Machinery

Hammond Machinery Builders, Inc.—Described and illustrated in 20-page catalog No. 75 are bench and floor type wheel grinders, polishing lathes and backstands of various sizes and capacities for abrasive belt grinding, polishing and buffing applications. Also included in coverage are buffing and polishing accessories, specifications and general information on Hammond cyclone and filter type Duskolectors.

For more details circle NED-1716 on enclosed inquiry slip

Line of Process Machinery

Hardinge Co.—Line of process machinery for mining, chemical, stone, ceramics, mineral, paper, water, industrial waste and sewage applications are described in 8-page illustrated bulletin No. 100-A. Machinery for agitating, calcining, clarifying, classifying and separating, conveying, cooling, digesting, drying, flocculating, feeding, filtering, grinding, hydrating, sampling, scrubbing and thickening, concentrating and pumping is included.

For more details circle NED-1717 on enclosed inquiry slip

Gears, Speed Reducers & Couplings

Philadelphia Gear Works, Inc.—"Power-Thrifty Products by Phillie Gear" is title of 4-page illustrated bulletin which presents line of gears, speed reducers, flexible couplings and LimiTorque valve controls. Types and size ranges are outlined.

For more details circle NED-1718 on enclosed inquiry slip

Sound Tape Recording

Minnesota Mining & Mfg. Co.—"Sound Ideas for Business and Industry" is title of 16-page illustrated booklet SR-BI which lists 20 ways in which Scotch brand sound recording tape produced savings in money, materials and manpower. It also tells how tape has solved problems in record keeping, sales training, time and motion studies, communications and sales promotion. Tape can be edited, erased and reused.

For more details circle NED-1719 on enclosed inquiry slip

Electrical Connector

Cannon Electric Co.—32-page pocket-size service manual is illustrated handbook on "Using the AN-'M' Connector"—a vibrationproof and pressurized connector for aircraft, radar, instrument and general electrical applications. It also covers proper servicing of the AN-'M' and other resilient-insert connectors.

For more details circle NED-1720 on enclosed inquiry slip

Acid-Resistant Work Clothes

Mine Safety Appliances Co.—Work clothes made of MSA ChemKlos, a Dynel fabric which resists acids, caustics, wear, moths, mildew, shrinkage, snagging and tearing are subject of 4-page illustrated folder No. CF-28. Resistant qualities are in fabric itself not added by treating process. It is available in shirts, trousers and coveralls.

For more details circle NED-1721 on enclosed inquiry slip

Controlled Volume Pumps

Milton Roy Co.—24-page illustrated bulletin No. 251 describes line of motor driven controlled volume pumps in capacities from 1 pt to 1350 gph against pressures up to 20,000 psi. Heavy viscous liquids, light solvents, abrasive slurries, liquefied gases and solids in suspension are but a few of the liquids that can be handled. Pump capacity can be regulated by plunger speed and stroke adjustments.

For more details circle NED-1722 on enclosed inquiry slip

Refrigerator Hardware

Kason Hardware Corp.—100-page "Refrigerator Hardware Catalog" itemizes over 200 hardware items used extensively by commercial refrigeration industry, along with illustrations, installation diagrams and specifications. Featured are nonprotruding Edgemont latches, adjustable hinges, iron hardware and Safeguard latches for Super-Freezer and cooler doors.

For more details circle NED-1723 on enclosed inquiry slip

Machining of Stainless Steels

Armco Steel Corp.—40-page illustrated fabricating manual "Machining of Armco Stainless Steels" is fully revised. Included are complete listing of grades of stainless together with analyses and individual descriptions of grade characteristics. Recommended machining speeds are given for extra-low carbon grades as well as precipitation-hardening types.

For more details circle NED-1724 on enclosed inquiry slip

Solve YOUR LAMINATED PLASTICS PROBLEMS AS EASY AS... 1 2 3

It's as easy as that when you rely on Taylor *full-line* Service. Here's why:

1. If your problem demands *vulcanized fibre* that is tough, high in dielectric strength and light in weight, you can solve it with Taylor Vulcanized Fibre in sheets, rods, strips, or coils.

2. If your problem calls for *phenol fibre* or *glass melamine* and *silicone laminates*, to meet specific characteristics, you'll find the material you need in our wide range of grades, available in sheets, tubes, rods and strips.

3. If you are looking for a supply source for parts fabricated to your specifications, Taylor Fabricating Service can turn out precision-parts on time ready for your production line.

Want to check Taylor Laminated Plastics and Vulcanized Fibre with corresponding government grade designations? Write for Data Sheet ND2.

Taylor
TAYLOR FIBRE CO.
NORRISTOWN, PENNSYLVANIA
LA VERNE, CALIFORNIA
Offices in Principal Cities

For more details circle NED-1725 on enclosed inquiry slip

Many NAGLE PUMPS BUT ALL ARE FOR ABRASIVE or CORROSIVE MATERIALS

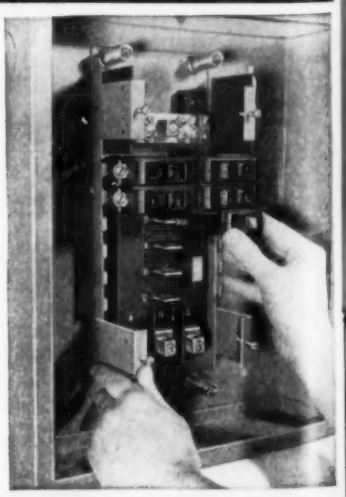
THERE are many types of pumps—numerous pump manufacturers—but WE SPECIALIZE in pumps for abusive applications—pumping slurries, sludges, tailings, acids, hot liquids. The 2" type "SW-OB," frame 95J, pump is typical. Made for a large eastern chemical company to handle sulphuric acid, saturated with chlorine, it has rendered splendid service. The vessel on which the pump is mounted is of Hastalloy. This single stage inverted entrance pump is designed for wet pit submerged operation. Dual radial bearings and balanced shaft eliminate deflection and whip—Nagle Pumps run quietly. Designed throughout for easy dismantling. Threaded and bolted Type "D" 4-vane impeller can't come loose.

Send For Catalog 4906

Nagle Pumps, Inc.
INDUSTRIAL PUMPS FOR ABUSIVE APPLICATION
1255 Center Ave. Chicago Heights, Ill.

For more details circle NED-1726 on enclosed inquiry slip

NEW CLASS I PANELBOARD IS *FIRST* WITH PLUG-IN BREAKER



Trumbull's new line of NLTQ Panelboards introduces the first *plug-in* circuit breaker with quick-make, quick-break. Also: thermal-magnetic protected, physically interchangeable breakers.

OTHER NEW FEATURES
Interior—spring-mounted, self-aligning.
Molded-in-plastisol busbar and stab assembly.
Sequence phasing—in all sizes

Write for Bulletin TEB-14, THE TRUMBULL ELECTRIC MANUFACTURING COMPANY, Plainville, Conn.

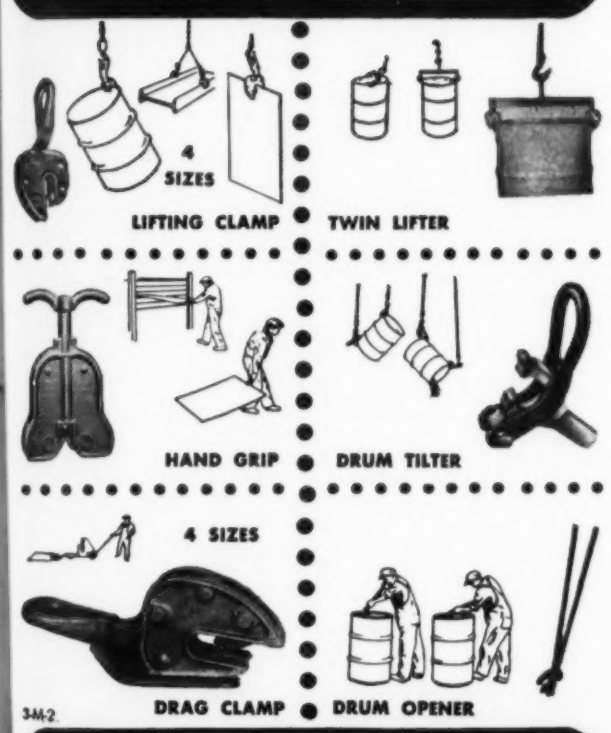
TRUMBULL (T) ELECTRIC
Department of General Electric Company, Plainville, Conn.

For more details circle NED-1727 on enclosed inquiry slip

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-1728 on enclosed inquiry slip

MERRILL MATERIALS HANDLING DEVICES

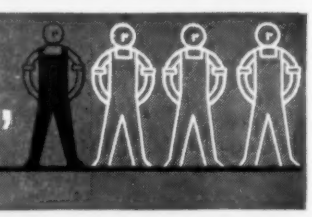


3M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

For more details circle NED-1729 on enclosed inquiry slip

triple your "men-power"



with this LOW COST STUEBING ENGINEERED TRUCK . . . . Triple your power—but not your payroll — with the truck your men prefer. Fleet owner studies prove it pays for itself in the first three months. Unusual ease of operation make it labor's favorite. Easy lift, automatic action, positive safety. Machine bolted frames; all parts machined and standardized. Timken bearinged steering column.

For full details on the Red Arrow (single-stroke) or the Hydromatic (multi-stroke) send for Bulletin "G".

LIFT TRUCKS, INC.
Walter Stuebing, President
2425 Spring Grove Ave. Cincinnati 14, Ohio

For more details circle NED-1730 on enclosed inquiry slip

New Literature & Catalogs

Internal Hole Gage

Comtor Co.—The Comtorplug, a versatile precision internal gage which indicates size of holes to fractions of 0.0001-in. is discussed in 8-page illustrated bulletin No. 46 along with its applications. Gage parts, sizes and prices are tabulated.

For more details circle NED-1731 on enclosed inquiry slip

Tube Expanders

Gustav Wiedeke Co.—Ideal tube expanders for rolling tubes in condensers, heat exchangers and other heat transfer units with thin, thick or multiple tube sheets are subject of 4-page illustrated brochure No. 71. Condensers feature both adjustable and reversible collar, and ball bearing-adjustable thrust collar.

For more details circle NED-1732 on enclosed inquiry slip

Heat Treating Furnaces

Hevi Duty Electric Co.—"Maintenance Guide for Electric Heat Treating Furnaces" is 16-page cartoon-illustrated manual for operators and management. Handy check chart simplifies maintenance schedules, reduces break-downs and prolongs furnace life.

For more details circle NED-1733 on enclosed inquiry slip

Soil Compaction

Barco Mfg. Co.—Production data required for figuring work schedules and costs on soil compaction jobs are presented in 8-page illustrated bulletin 621 which also covers use of Barco portable gasoline Rammer for tamping fill or back-fill in restricted areas.

For more details circle NED-1734 on enclosed inquiry slip

Hand Trucks

Howe Scale Co.—Two and four wheel hand trucks, trailers, baggage wagons, platform skids, dollies, lift jack systems, wheels, casters and molded-on rubber tired wheels are detailed in 12-page condensed catalog 508-B.

For more details circle NED-1735 on enclosed inquiry slip

Twentieth Anniversary

Clayton Mfg. Co. marked its 20th anniversary with publication of 16-page illustrated brochure No. C-352 which presents summary of company's history, management organization, plant layout as well as inventory of production tools and plant equipment.

For more details circle NED-1736 on enclosed inquiry slip

Heating Coils

Trane Co.—68-page illustrated bulletin DS-385 describes complete line of steam and hot water coils in both standard and nonfreeze types. Outlined are capacities selection, performance, installation and dimension data. Detailed are extended surface heating coils of copper, aluminum, steel, stainless steel, Inconel and Monel.

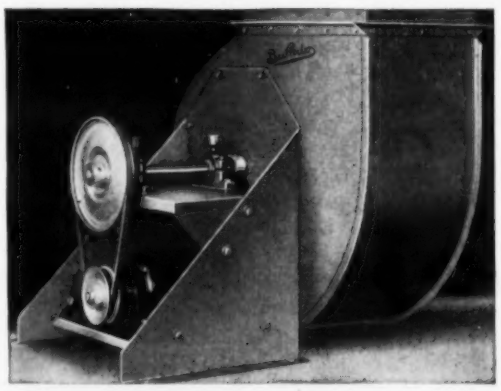
For more details circle NED-1737 on enclosed inquiry slip

Entrance Doors

Ellison Bronze Co.—How Ellison Balanced Doors afford rapid passage of traffic in office, commercial and industrial buildings is explained in 12-page illustrated bulletin 16a-EL. Construction details and application information are included.

For more details circle NED-1738 on enclosed inquiry slip

The *Inexpensive* Way
To Get RELIABLE VENTILATION!



WRITE FOR BULLETIN 3720
ON THESE POPULAR FANS—

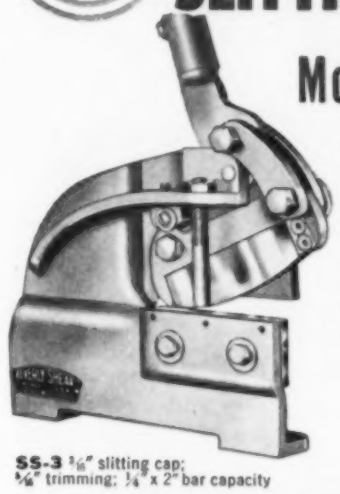
"Buffalo" BELTED VENT SETS are lightweight, compact non-overloading fans, available in sizes from 500 to 20,000 c.f.m. at ¼" static. Simple to install, high in efficiency, quiet running. Available with hood for outdoor installation. Write for facts NOW!

BUFFALO FORGE COMPANY
215 Mortimer St. Buffalo, New York
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

"Buffalo" BELTED VENT SETS

For more details circle NED-1739 on enclosed inquiry slip

NEW Beverly SLITTING SHEAR



More Power...
Easier Cutting
Exclusive Design
Cleaner Cuts
Ruggedly Built
last a lifetime
Capacities to 3/16"

SS-3 3/16" slitting cap; 5/16" trimming; 1/4" x 2" bar capacity

Get faster, easier slitting and trimming with a new design Beverly "SS" Series Slitting Shear. Rigid, strongly braced frame; compounded linkage and extra strength where needed. Many exclusive features. Write for FREE illustrated Bulletin.

See your Beverly Distributor today.
Ask for a demonstration—no obligation.

Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

For more details circle NED-1740 on enclosed inquiry slip

SAVES TIME EFFORT ERRORS

LABELON PLASTIC TAPE
Write on it

WON'T SMUDGE
STAYS CLEAN FOREVER
RESISTS: DIRT · OIL WATER · ACIDS

STICKS WITHOUT MOISTENING

PERFECT FOR FACTORY, LABORATORY, OFFICE

Nothing else like LABELON—the amazing "Write on it" plastic tape! Use it to label stockroom shelves, bins, tools, hard-to-mark parts; for indicating rejects and service department repairs; for marking laboratory equipment, supplies, experiments; for panelboards or wiring; for office files, folders, etc.

LABELON TAPE sticks without moistening to any smooth, clean surface—yet can be quickly removed. Resists heat up to 150°. Just write on it with pencil or stylus—message won't smudge. Choice of widths and colors. Handy dispenser with cutter bar. See your nearest dealer, or write for sample and prices.

Write to Dept. NED

LABELON TAPE CO., Inc.
450 Atlantic Ave., Rochester 9, N.Y.

For more details circle NED-1741 on enclosed inquiry slip

FOLEY FILED SAWS Pay big dividends . . . . . HERE!

Only the best saw sharpening can give you top-speed production. The Foley Saw Filer quickly puts old saws with dull and irregular teeth back in perfect condition—and keeps them perfect! 25% to 40% increase in production is frequently realized with Foley-filed saws.

ONE machine files crosscut circular saws, band saws, hand saws.

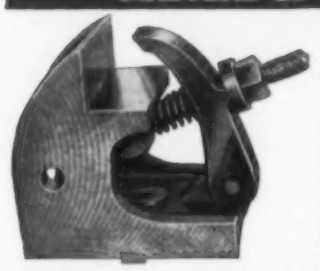
30 DAY TRIAL OFFER permits you to use a Foley Saw Filer in your own shop. You can't lose on this offer—write or send coupon.

FOLEY Automatic SAW FILER

FOLEY MFG. CO. 3323 N.E. Fifth St., Minneapolis 18, Minnesota
Please send literature, and details of your 30-DAY TRIAL OFFER.
Name .....
Address .....

For more details circle NED-1742 on enclosed inquiry slip

· HART ·
MILLING FIXTURES
MASTERS OF 1000 SETUPS



Eliminate many needs for Special, Expensive Jigs and Fixtures

Hart Milling Fixtures make themselves popular and profitable in any shop—are used in either horizontal or vertical position. Suitable to hold round, hexagonal, octagonal, or square stock, aligning the work with the machine. Grip holds the work on the bottom as well as on back. Generally sold in pairs. Made in 4 sizes—to hold stock from ½ to 5 inches.

HART DIVIDED MACHINE VISE JAWS

These Jaws are very useful on any machine table. They clamp or bolt to the table, the angles firmly holding the work down. Each hardened tool steel jaw measures 3" x 6" x ½". The angle edges are serrated.

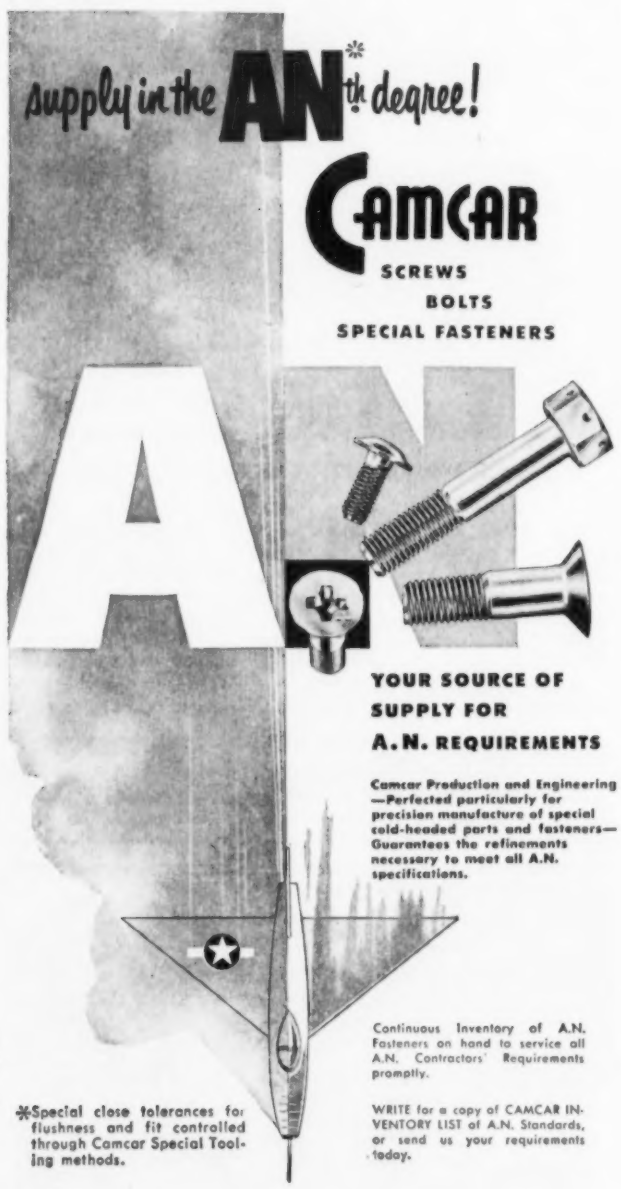
We also manufacture Hart Index Centers. Write for new bulletin.

WALTER W. FIELD & SON INC.
39 HAYWARD STREET, CAMBRIDGE 42, MASS.

For more details circle NED-1743 on enclosed inquiry slip

supply in the AN* th degree!

CAMCAR
SCREWS
BOLTS
SPECIAL FASTENERS



YOUR SOURCE OF SUPPLY FOR A.N. REQUIREMENTS

Camcar Production and Engineering—Perfected particularly for precision manufacture of special cold-headed parts and fasteners—Guarantees the refinements necessary to meet all A.N. specifications.

Continuous Inventory of A.N. Fasteners on hand to service all A.N. Contractors' Requirements promptly.

WRITE for a copy of CAMCAR INVENTORY LIST of A.N. Standards, or send us your requirements today.

*Special close tolerances for flushness and fit controlled through Camcar Special Tooling methods.

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SCREW & MFG. CORP.
602 EIGHTEENTH AVE., ROCKFORD, ILL.

"PRODUCTION-DESIGNED FOR YOUR ASSEMBLY LINE"

For more details circle NED-1744 on enclosed inquiry slip

New Literature & Catalogs

Heat Exchangers

Corning Glass Works, Technical Products Div.—Charts and nomographs which simplify calculation of heat transfer requirements are included in 8-page illustrated bulletin PE-8 which also describes new cascade type heat exchanger. Using Pyrex glass heat exchange tubes, coolers provide efficient means for cooling corrosive fluids.

For more details circle NED-1745 on enclosed inquiry slip

Electric Insulating Materials

General Electric Co., Chemical Div.—8-page illustrated bulletin CDL-35 lists properties and applications of G-E varnishes, Glyptal alkyd resin insulating finishes, varnished cloths and tapes, sealing and filling compounds, and silicone insulating materials.

For more details circle NED-1746 on enclosed inquiry slip

Bronze Electrodes & Wire Products

Ampco Metal, Inc.—Large "Bronze Electrodes Selection and Preheat Chart" is designed for wall mounting and lists all Ampco bronze weldrod and wire products together with their applications, mechanical properties, deposit chemical composition, recommended current and polarity, NEMA color markings and diameters.

For more details circle NED-1747 on enclosed inquiry slip

Refractory Data

Ironton Fire Brick Co.—8-page illustrated booklet "Handy Data for Users of Refractories" contains tabulations and formulas to aid in building, repairing and relining furnaces. Standard fire brick sizes and types, temperature conversion chart and table of pyrometric cone temperature end points are included.

For more details circle NED-1748 on enclosed inquiry slip

Industrial Plastic Laminates

General Electric Co., Chemical Div.—Available grades of Textolite industrial laminates are described in 8-page illustrated catalog CDL-38. Mechanical, chemical, physical, thermal and electrical properties are listed and tolerances are given.

For more details circle NED-1749 on enclosed inquiry slip

Hammer Mill

Allis-Chalmers Mfg. Co.—How the multi-impact principle of the Pulverator hammer mill operates to pulverize thoroughly limestone, oyster shells and other nonabrasive materials is explained in 12-page illustrated bulletin 07B6265A. Capacities range from 2½ to 160 tons per hour.

For more details circle NED-1750 on enclosed inquiry slip

Replacement Capacitors

Cornell-Dubilier Electric Corp. — 28-page illustrated catalog 200B contains complete information on service replacement capacitors. Data are given on ceramic, electrolytic, mica and paper capacitors; test instruments; interference filters and motor starting capacitors. Units for electronic, industrial and other service are included.

For more details circle NED-1751 on enclosed inquiry slip

Electric Plant Price List

Universal Motor Co.—Form SE-3 is electric plant price list which covers air and radiator cooled and marine water cooled electric generating plants. Line includes models rated from 250 to 25,000 watts in gasoline engine models and from 2000 to 36,000 watts in diesel plants.

For more details circle NED-1752 on enclosed inquiry slip

Woven Wire Conveyor Belts

Cambridge Wire Cloth Co.—"9 Ways to Speed Production and Maintain Sanitary Requirements in Fruit Processing Plants" is title of technical folder which describes typical applications of woven wire conveyor belts.

For more details circle NED-1753 on enclosed inquiry slip

Hydraulic Fluid

Monsanto Chemical Co.—12-page illustrated booklet on Pydraul F-9 nonflammable hydraulic fluid cites properties, applications and advantages of this material. It features high lubricity, noncorrosiveness, chemical stability and excellent pumpability.

For more details circle NED-1754 on enclosed inquiry slip

Plywood & Building Products

United States Plywood Corp.—44-page "Weldwood Catalog" No. 1052 contains descriptions, photographs, specifications and list prices of softwood and hardwood plywood, doors, plastics and specialties which comprise company's line.

For more details circle NED-1755 on enclosed inquiry slip

Radiation Pyrometers

Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—28-page illustrated catalog 9300 describes line of Radiamatic pyrometers. Operating principle, application information and other data are given on this line of compensated radiation detectors for temperatures up to 7000° F.

For more details circle NED-1756 on enclosed inquiry slip

NEW DISC CLUTCH

for gasoline engines, electric motors, speed reducers, etc.

operates with light pressure
picks up load without grab

integral V-belt pulley
integral sprocket
cut-off coupling or sleeve
easy manual operation
adjustable
powerful

For stub or through shaft application, these new Type K clutches—rated up to .8 HP at 100 rpm—have generous safety factors throughout to stand severest service. Threaded steel adjuster permits precise easy adjustments to assure maximum capacity and minimum engaging pressure. Clutch locks itself in engaged position.

Write for new descriptive Bulletin K-1, including complete specifications.

THE EDGEMONT MACHINE CO.
2200 HOME AVENUE • DAYTON 1, OHIO

For more details circle NED-1757 on enclosed inquiry slip

30 DAY DELIVERY

HOW TO SPEED PRODUCTION
HOW TO SAVE ⅓ INSTALLATION SPACE
HOW TO GET MORE BORE POWER
HOW TO SAVE MONEY

Use Dependable, Powerful
O-M CYLINDERS
AIR—WATER—HYDRAULIC
In full range of sizes (1½" to 8" bores). All machined steel with bearing bronze throughout. Interchangeable parts and mounting brackets.

FREE CATALOG
Brand new! 28 pages of specifications, diagrams, and parts listing.

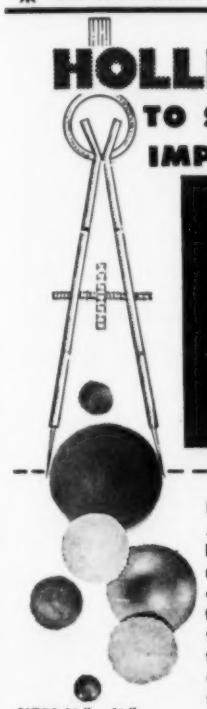
FREE TEMPLATES
Complete set. Shows all cylinders and mounting brackets, ½ scale.

Write today to

ORTMAN MILLER MACHINE CO.
1222 150th St., Hammond, Indiana

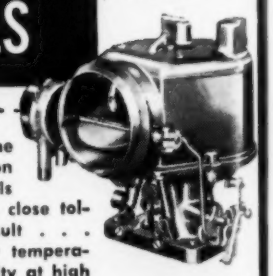
For more details circle NED-1758 on enclosed inquiry slip

HOLLEY DISCOVERS HOW TO SPARK A CARBURETOR IMPROVEMENT WITH



ACE PRECISION NYLON BALLS

Holley Carburetor Co., Detroit, uses Ace Nylon Balls as check valves in carburetors to permit a higher degree of spark advance.



For the first time . . . DuPont Nylon FM #10001 balls mass-produced to close tolerances. The result . . . toughness at low temperatures, form stability at high temperatures, light weight, chemical and abrasion resistance.

SIZES ⅛" - ¾"
TOLERANCES ±.001

Hundreds of Industrial Applications! Let our engineers advise you.

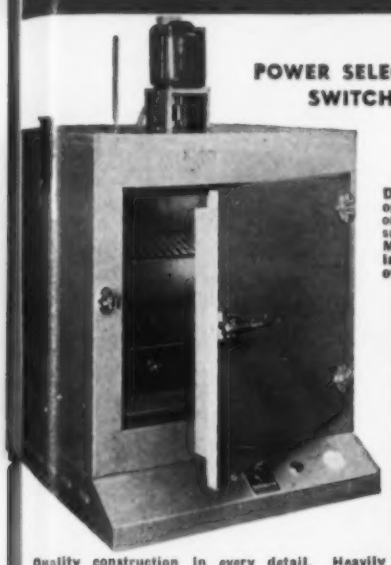
Request samples and bulletin TODAY

ACE HIGH QUALITY TRADE MARK

ACE PLASTIC COMPANY
Precision Plastic Fabricators
91-28 VAN WYCK BLVD. • JAMAICA 2, N. Y.

For more details circle NED-1759 on enclosed inquiry slip

FORCED DRAFT ELECTRIC
UTILITY OVENS



POWER SELECTOR SWITCH

GUARANTEED 1 YEAR

Designed to speed up heating operations for industrial and laboratory work. Insures superior results. BALL BEARING Motor. MULTI-BLADED Blower circulates heated air throughout entire oven for uniform temperatures.

FASTER DRYING AND BAKING
FASTER CONTROL RESPONSE
TEMPERATURE UNIFORMITY
POWER SELECTOR SWITCH
STAINLESS STEEL INTERIOR
37.8° C. TO 260° C. RANGE
ALL WIRING ENCLOSED

Quality construction in every detail. Heavily insulated. Modella heater bank. Chrome plated hardware. Working space 19" w. x 15" d. x 18" h. Available for 115V. or 230V. 60 Cycle A.C. 1600 watts (maximum). 100° F to 500° F maximum. Complete price $275.00.
Contact your local dealer or

*WRITE for Illustrated Catalog

BLUE M ELECTRIC COMPANY
306-308 WEST 69TH STREET • CHICAGO 21

For more details circle NED-1760 on enclosed inquiry slip

Don't spoil it-KROIL it!

Don't ruin a valuable piece of equipment merely because some part is rusted tight. Apply Kroil, the amazing new chemical lubricant that creeps into millionth inch spaces (proved by laboratory tests), dissolves rust, supplies necessary lubrication and

LOOSENS FROZEN PARTS

9000 of America's leading plants can't be wrong! They used KROIL during the last war and are still depending on it to save expensive labor and valuable parts. They say: "Kroil loosened bushings after a 12-ton press had failed" . . . "on repairing heat treat trolleys formerly destroyed every nut. Now Kroil saves them all, and time, too" . . .
You too should be using KROIL every day. Try it on money-back basis. Gallon $3.50; with Kroiler trigger squirt gun (shoots a drop or a stream 15 feet, if desired) $4.75, f.o.b. our factory.

KANO LABORATORIES 1074 S. Thompson Lane Nashville 11, Tenn.

For more details circle NED-1761 on enclosed inquiry slip

A BLANKING DEPARTMENT FOR $120.00?

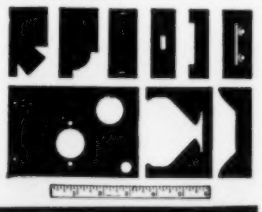
LESLIE MODEL A HAND PUNCH PRESS $120.00 F.O.B. CHICAGO

You can do short run punching and blanking jobs faster, easier on a low cost Leslie Model A Hand Punch Press.

Tool your jobs at low cost from our wide variety of standard punches and dies.

- 15 Ton capacity.
- Patented Leaf Assembly provides accurate punch and die alignment.
- 6" throat depth permits reaching to center of 12" piece.
- Large Punch Plate and Bed permits blanking over big areas.
- Standard Punch and Die changes within 2 minutes.

Diagram (right) illustrates versatility of this Press—each blanking done with 1 stroke.



Write now for illustrated catalog and circular showing punches and dies available from stock.

LESLIE WELDING CO.
2939 W. Carroll Ave., Chicago, Ill.

For more details circle NED-1762 on enclosed inquiry slip

New Literature & Catalogs

Steel Fabrication & Products

International Steel Co.—"This Is International Steel" is title of 44-page booklet which portrays fabrication facilities of this company and shows typical work being produced which ranges from revolving and industrial doors to standard steel buildings. Company is equipped to supply structural steel and steel fabrications in wide range of sizes.

For more details circle NED-1763 on enclosed inquiry slip

Material Pumps

Stewart-Warner Corp., Alemite Div.—Twenty-two models of Versatal Tornado material pumps are described in catalog "Open the Door to Production." Combining air motors and various pump tubes, these units pump directly from original containers holding from 5 to 55 gal. They handle such materials as underbody coatings, roofing materials, putty, caulking, sealers, paint, adhesives and food products in all their varying consistencies. Capacities range from ½ to 20 gpm.

For more details circle NED-1764 on enclosed inquiry slip

Testing Machines

American Machine & Metals, Inc., Riehle Testing Machines Div.—32-page illustrated catalog RU-7-52 contains specifications and operating details on hydraulic universal testing machines with capacities up to 400,000 lb.

For more details circle NED-1765 on enclosed inquiry slip

Palletizing Data

Acme Pallet Co.—Engineering data on pallets and palletized materials handling are subject of 16-page illustrated catalog-handbook No. 156. Pallet selection, typical palletizing patterns, tables of wood strengths, suggested applications and details of various types of pallets, collapsible box pallet and industrial wooden boxes are presented.

For more details circle NED-1766 on enclosed inquiry slip

Dust Collectors

American Wheelabrator & Equipment Corp.—36-page illustrated catalog 72-B deals with assemblies and knocked-down models of dust collectors which handle air flow ranging upward from 252 cfm. These units filter air through cotton, wool and synthetic cloth, depending upon application. Continuous automatic units are described which need not be shut down for cleaning.

For more details circle NED-1767 on enclosed inquiry slip

Rotary Work Feed Tables

Bellows Co.—16-page bulletin T-85 contains installation photographs and detailed descriptions of both Bret 22 and Bret 10 rotary work feed tables having 22-in. and 10-in. diameter table tops, respectively. It also shows wiring and electrical hook-up diagrams for combining tables with other packaged pneumatic devices.

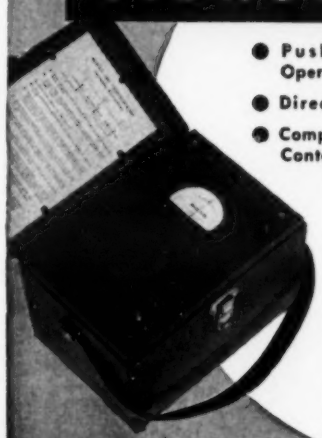
For more details circle NED-1768 on enclosed inquiry slip

Machining Copper Alloys

American Brass Co.—32-page illustrated booklet B-3 which suggests cutting speeds, feeds, tool rakes and clearances to be used on more than 40 different copper alloys is based on use of standard cutting tool materials. Practical suggestions on turning and cutting-off tools, form tools, drills, reamers and taps, thread chasers, milling cutters and coolants are included, along with composition and weight tables and conversion factors.

For more details circle NED-1769 on enclosed inquiry slip

Simple • Accurate GROUND RESISTANCE TESTING with VIBROGROUND



- Push-Button Operation
- Direct-Reading
- Completely Self-Contained
- True readings, regardless of earth resistance and condition, stray frequencies, voltages or currents

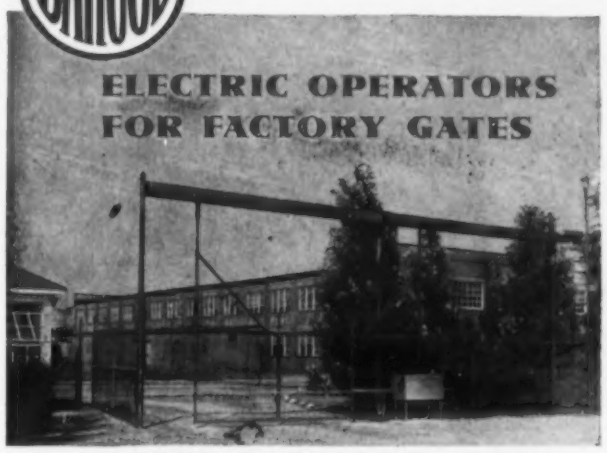
YOU can be sure of safe, effective grounding of all types of electrical systems when you test with the light, easy-to-use Vibroground. Simple operation and built-in accuracy virtually eliminate reading errors. No leveling, cranking or outside power source is necessary; and direct readings are independent of auxiliary probe resistance.
Full data on Vibrogrounds, including testing techniques and illustrations, is yours for the asking.

Write for BULLETIN 105

ASSOCIATED RESEARCH, Incorporated
"Precision Instruments Since 1936"
3786 West Belmont Avenue • Chicago 18, Illinois

For more details circle NED-1770 on enclosed inquiry slip

BARCOL



Power-operated entrance gates to industrial plants are important for adequate protection and the proper control of traffic. The Barcol Electric Gate Operator, as illustrated above, is mounted in a weatherproof box at the side of the opening and attached by a chain at the correct points to insure smooth operation, with remote push-button control in the guardhouse. Barcol Operators are made for various types and sizes of such gates—let our representative give you the details.

FACTORY-TRAINED SALES AND SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY, 108 Mill St., Rockford, Ill.

For more details circle NED-1771 on enclosed inquiry slip

Economize on cleaning costs NOW

One worker with *one* G. E. heavy duty cleaner can clean *any* surface . . . pick up small scrap for salvage . . . clean high-up, out-of-reach areas quickly and safely. By using a simple attachment, he can clean *wet* surfaces . . . pick up mop water, toilet overflow, drinking fountain leakage, etc.

G. E. industrial cleaners were designed after thorough survey of industrial cleaning needs. That's why G. E. cleaners have so many time and money saving features.

For instance—nozzles are extra wide (12" and 18") to cover big areas quickly. Motors have extra power to pick up industrial scraps or fine dust with equal ease. Each unit converts quickly to powerful *blower* for collecting coarse litter into convenient piles for easier disposal. These and other features of G. E. cleaners help you get to the root of high cleaning costs—make each of your maintenance workers more productive. **Mail coupon for details.**

Industrial Cleaners

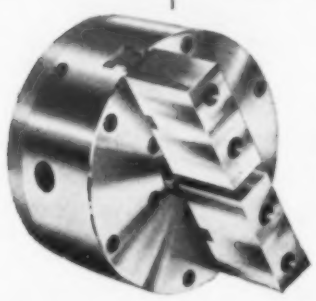
GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, Dept. 22-2628
1285 Boston Ave., Bridgeport 2, Conn.
Without obligation, please send complete details on heavy-duty cleaning equipment.

NAME .....
FIRM .....
ADDRESS .....
CITY ..... STATE .....

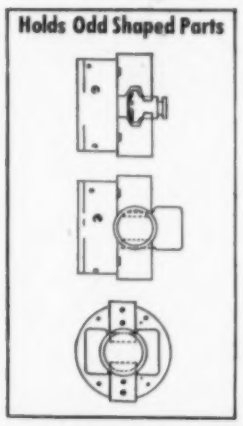
For more details circle NED-1772 on enclosed inquiry slip

Buck ADJUST-TRU CHUCKS



NEW 2-JAW AVIATION CHUCK

Holds Odd Shaped Parts



THIS is the slickest way ever devised to hold irregular shaped parts for duplicate machining operations within .0005 *precision.*

The master jaws have *soft* top jaws which you machine to hold your specific work, then harden if you wish. That's not new. But the way the Adjust-Tru principle saves time on accurate rechucking is truly amazing. The jaws move in and out simultaneously to grip the work with a *single-pinion* action — just like any scroll chuck.

You make but one adjustment for precision when you start your run — then re-chuck with scroll chuck speed without further adjustment.

Ask for a catalog with full details.

BUCK TOOL COMPANY
222 Schippers Lane
KALAMAZOO, MICHIGAN

For more details circle NED-1773 on enclosed inquiry slip

Fast . . . accurate . . . the power, gun firing, turret control and communications in a fighting tank depend on expert industrial design and production techniques on the home-front, where speed and precision meet again in business machine "paper work". In mills, factories and in banks Guardian Relays control devices that count—compute—sort—convey—package—vend—meter and mail. Basic . . . flexible . . . government approved . . . *hermetically sealed* or open type mounted . . . Guardian Relays serve all fronts . . . will serve you well!

GUARDIAN ELECTRIC
1626-B W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

For more details circle NED-1774 on enclosed inquiry slip

Send for Free Sample of
KEY-TITE...
THE LEAK-PROOF SEALER FOR GASKET AND PIPE JOINT CONNECTIONS!

Sealing with Key-Tite will prevent leaks on all lines carrying water, gas, low pressure steam, compressed air, etc. It will not affect the color or taste of potable liquids so consequently can be used freely on piping and equipment where food or beverages are prepared for human consumption.

See for yourself! Send for liberal free sample to be tested in your own plant.

KEY Company
2601 McCasland Ave., East St. Louis, Ill.

KEY COMPANY, 2601 McCasland Ave., East St. Louis, Ill.
Gentlemen:
Please forward free sample of Key-Tite Water-proof Sealing Compound.
Company Name.....
Address.....
Individual.....
Position.....

For more details circle NED-1775 on enclosed inquiry slip

New Literature & Catalogs

Steel Framed Hand Trucks

Fairbanks Co.—Illustrated and described in 4-page circular is line of steel framed hand trucks. First page covers Commander platform trucks, center spread is devoted to 9000 series two wheel hand trucks and last page shows number of standard and special purpose trucks.

For more details circle NED-1776 on enclosed inquiry slip

Microscope Operation

Bausch & Lomb Optical Co.—"The Theory of the Microscope" is title of 24-page booklet which presents a nonmathematical exposition of how a microscope works, along with notes on conditions which influence optical performance. Objectives, eyepieces, condensers, filters and types of illumination are treated in a nontechnical manner.

For more details circle NED-1777 on enclosed inquiry slip

Lubricated Plug Valves

H. K. Porter Co., Porter Valve Div.—By means of cross-section and cut-away illustrations as well as line drawings, features of line of lubricated plug valves are presented in descriptive catalog. Valve sizes range from ½ to 12 in. Data on pressures, construction materials, design, function, manufacturing methods, accessories, lubricants and pressure and temperature ratings are included.

For more details circle NED-1778 on enclosed inquiry slip

Rust Preventive Chart

Nox-Rust Chemical Corp.—Rust preventive use chart No. 1151 lists latest government specifications for preservative oils and coatings to be used in packaging, plus Nox-Rust product conforming with each. It describes uses, methods of application and physical properties of products most often required.

For more details circle NED-1779 on enclosed inquiry slip

Tube Finned Heaters

C. A. Dunham Co.—A handy guide to solving heating problems of industrial and commercial buildings through use of Fin-Vector radiation is bulletin No. 1251. Pictures and drawings describe sloping top, flat top and expanded metal enclosures, and text explains design, material and construction features of expanded tube finned heating elements.

For more details circle NED-1780 on enclosed inquiry slip

Keyway Broaches

du Mont Corp.—Complete specifications are contained in 8-page catalog on Minute Man line of 23 standard sizes of keyway broaches and 21 sets for hand cutting of keyways from 1/16 to 1 in. width in any bore from ¼ to 3 in. diameter. Other products described include arbor presses, push-type keyway broaches for multiple production and magnetic base for positioning of dial indicator gages.

For more details circle NED-1781 on enclosed inquiry slip

Solenoid Valves

Jas. P. Marsh Corp.—Detailed specifications covering line of both direct acting and pilot operated solenoid valves are described in 4-page bulletin 77. Dimensional drawings and capacity charts are shown for each type along with installation and servicing instructions. Valve bodies are machined from solid brass bar stock and are Underwriters' approved.

For more details circle NED-1782 on enclosed inquiry slip

Heat Transfer Equipment

Trane Co.—Cutaway drawings, photographs, construction features and capacity and dimension tables supplement descriptions of line of air conditioning, heating, ventilating and heat transfer equipment in 36-page bulletin PB-290. Developments are featured, such as CenTraVac hermetic centrifugal water chilling units, new reciprocating compressors, centrifugal fans and gas-fired unit heaters.

For more details circle NED-1783 on enclosed inquiry slip

Punch & Die Care

F. J. Stokes Machine Co.—"How to Save Money on Punches and Dies" is title of 16-page bulletin 610 which summarizes ways and means for keeping punches and dies in condition for highest efficiency. Sections cover regular care, handling, mechanical contact, cleaning, storage, what to do about wear, lubrication and overloading. Do's and don'ts for handling rotary and single punches and dies are listed.

For more details circle NED-1784 on enclosed inquiry slip

Welding Design Manual

Eutectic Welding Alloys Corp.—72-page "Manual of Design and Welding Engineering" has 62 photographs and 132 drawings, as well as latest data and how-to-do-it articles. Weld diagrams, melting temperature and tensile strength tables and charts are included. Over 100 different Eutectic low temperature welding alloys for use with wide variety of metals are covered.

For more details circle NED-1785 on enclosed inquiry slip

for Fast, Economical Drilling — in all kinds of rock specify . . . easy to operate, easy to transport—

SYNTRON
100% Self Contained Gasoline Hammer
ROCK DRILLS

2000 Sharp Blows Per Minute
Drills Rock 20" Per Minute
Rotates Drill and Blows Hole Clean.
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SYNTRON CO.

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Write today for folder and price list.

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SIMONDS MACHINE CO., INC.
33 VIKING TERRACE • SOUTHBRIDGE, MASS.

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This picture shows a cross-section of a Security Locknut. The insert, indicated removed, is of high quality, heat treated, alloy spring steel and becomes a permanent part of the nut.

The insert is elliptical in shape and this design causes the retainer to grip the bolt with the terrific tension that only spring steel of great strength could exert and prevent the nut from turning. Simple — dependable—positive!

There is NO OTHER FASTENER LIKE THIS!

Perhaps you believe a cotter pin is the only way to hold anything positively on a shaft. A Security Locknut stays put where you wrench it even in the face of vibration that destroys the bolt.

Security Locknuts permit accurate adjustments with a torque wrench. They are complete as a unit. Nothing to line up. Installation involves only one operation. No holes to weaken the shaft.

Adjusted and readjusted them any number of times. *Removed and re-used them over and over again without impairing their locking power and without damage to the bolt.* If you have a vibration or fastener problem, Security Locknuts may save you money.

⅜ in. to 2 in. bolt sizes. Ask to see the Security Locknut Tests.

SECURITY LOCKNUT CORPORATION
NORTH AVE. & 15th AVE.
MELROSE PARK, ILL.

Special Offer

State the details of your fastener problem on your company letterhead and we will send you without obligation a sample Security Locknut for testing along with a Security Thread Chart.

Security
The Nut You Can't Shake Loose

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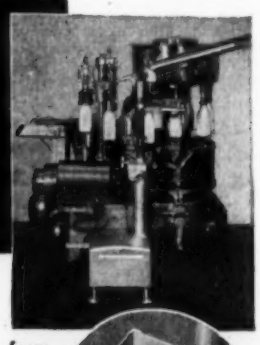
FEDERAL DIMENSIONAIR

The scale on the dial of this air gage is accurately calibrated to .00005" throughout its entire 7½" length. With the Federal Dimensionair you can rely on the accuracy of readings anywhere on the scale. The Federal Dimensionair has long operating range (.003") with 2500 to 1 magnification, providing for exploring irregularly shaped or tapered holes and permitting the same plug to be used on both rough and finished dimension. This clearance also means longer plug wear. The Dimensionair is easily set with only one master . . . it remains stable for long periods. Ask for demonstration or write for complete information and prices. Federal Products Corporation, 1172 Eddy St., Providence 1, R. I.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively.

For more details circle NED-1790 on enclosed inquiry slip

how to FEED MATERIALS ECONOMICALLY: use GAST rotary AIR PUMPS!



This unit, for example, seals milk bottles with Aluma-SEAL aluminum caps . . .

PROBLEM: Remove caps *one-at-a-time* from magazine, and hold ready to drop into feed chute.

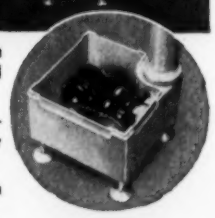
SOLUTION: Suction cup with 20" to 22" vacuum, produced by positive-action Gast Rotary Air Pump.

RESULT: Dependable, low-cost operation from portable Gast unit in housing on floor.

Just for a moment, consider how you could apply low vacuum for feeding sheet materials and small parts of paper, fibre, plastic or light metal.

The possibilities are enormous for extra speed — extra savings — extra safety. And Gast Rotaries are giving excellent service on scores of common — and unusual — applications.

When you have problems that might be solved with low vacuum or pressure, write Gast. "Air may be your Answer!"



see our CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

Gast Application Ideas Booklet—showing 26 design problems solved — sent upon request.

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(TO THREE H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

For more details circle NED-1791 on enclosed inquiry slip

New Literature & Catalogs

Vapor, Mist & Fog Collectors

Aget-Detroit Co.—Self-contained unit type collectors which remove vapor, mist and fog from wet machining operations are subject of 4-page illustrated bulletin 622. Vapor is extracted and cleared air is returned to working space. Table compares ratings and features of collectors.

For more details circle NED-1792 on enclosed inquiry slip

Relays & Controls

American Relay & Controls, Inc.—Information valuable to relay users is contained in 12-page catalog No. R-10 which describes 10 basic models of Amrecon relays of both alternating and direct current types. Also discussed are snap-action and latching relays, screw-terminal type relays, plug-in mountings and hermetically sealed models.

For more details circle NED-1793 on enclosed inquiry slip

Drill Presses

Cincinnati Lathe & Tool Co.—Described in 8-page illustrated bulletin D-108 are single and multiple spindle 16-in. bench and floor model drill presses. Features include six speeds, V-belt drive, full-floating spindle, precision bearings and accurate drilling. Tilting motor bracket simplifies spindle speed changes.

For more details circle NED-1794 on enclosed inquiry slip

Metering Fluid Pumps

Mechanical Products Corp.—16-page catalog contains specifications and technical data on line of Maisch metering pumps for dispensing industrial fluids. Made of stainless steel and pure carbon, gear type units are corrosion resistant, nonpyrogenic and can be quickly sterilized.

For more details circle NED-1795 on enclosed inquiry slip

Air Conveyor

Fuller Co.—Features, applications, specifications and photographs of F-H Airslide conveyor for transporting fine, dry materials are included in 8-page bulletin FH-2. Stream of material to be moved is supported on porous material, usually F-H fabric, and is sufficiently fluidized by air passing through fabric that gravity causes flow.

For more details circle NED-1796 on enclosed inquiry slip

Hydraulic Jacks, Pumps, Rams

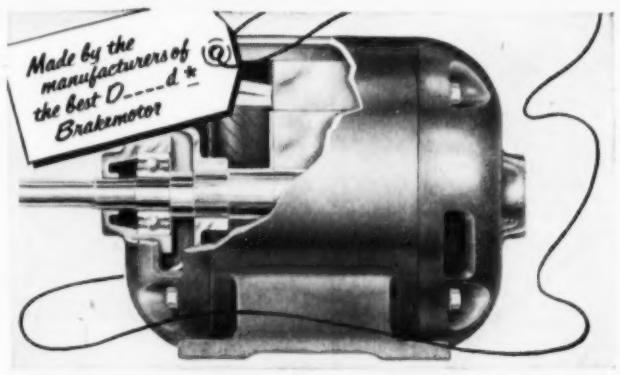
Templeton, Kenly & Co.—Specifications and application data on Simplex Re-Mo-Trol pumps and rams, Simplex-Jenny hydraulic pullers, standard hydraulic jacks, Simplex Rol-Toe foot lift hydraulic jacks and accessories and attachments can be found in 8-page illustrated bulletin 51-R. Equipment ranges in capacity from 10 to 100 tons.

For more details circle NED-1797 on enclosed inquiry slip

Blower Type Unit Heaters

Trane Co.—Capacity information and performance data on Torridor blower type unit heaters are included, along with selection and application information, in 56-page catalog DS-327A. Capacities range from 100,000 to 1,500,000 Btu. Heaters are used most frequently to heat large spaces where air must be spread over great distances. They serve as heating and ventilating units and can be used for special applications, such as fog removal, drying, curing and dry storage.

For more details circle NED-1798 on enclosed inquiry slip



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For more details circle NED-1799 on enclosed inquiry slip

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For more details circle NED-1801 on enclosed inquiry slip

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For loading and unloading heavy boxes, parts, etc. Mounted on heavy duty casters. Hydraulic height adjustment on upper end. Write for Bulletin 2080.

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For more details circle NED-1802 on enclosed inquiry slip

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★ EASY
★ FAST
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Simplify your nameplate panel marking with the Matthews "222" Nameplate Marking Machine.

Nameplates with your combination of panels can be marked easily with either the pneumatic, hydraulic or hand operated nameplate units.

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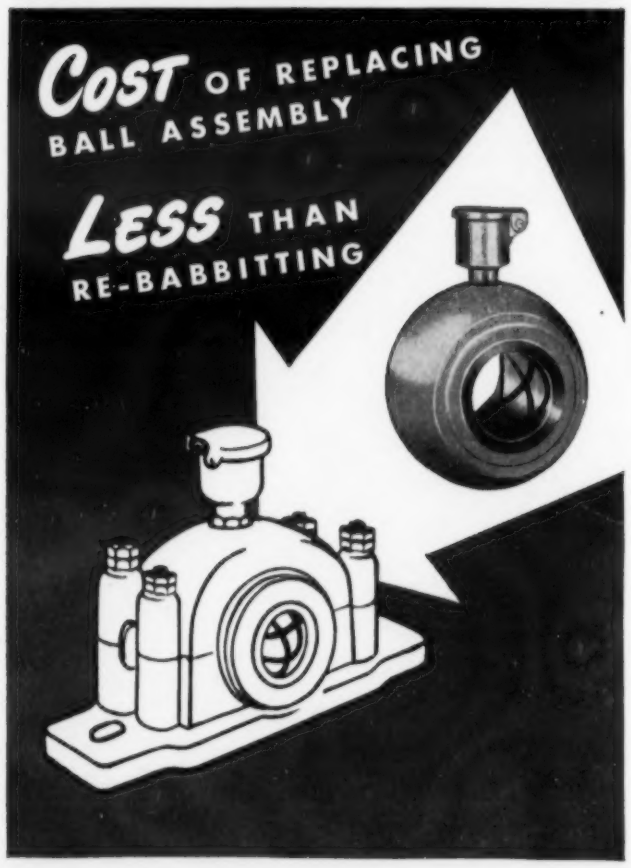
CHICAGO • CLIFTON, N. J.

For more details circle NED-1803 on enclosed inquiry slip

COST OF REPLACING BALL ASSEMBLY

LESS THAN RE-BABBITTING



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For more details circle NED-1804 on enclosed inquiry slip

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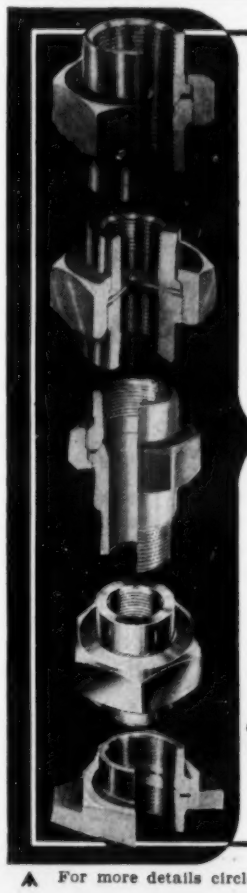

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Sound Powered Telephones

United States Instrument Corp.—Features of industrial sound powered telephone stations and systems, office and mine type systems and specifications for all types are given in 8-page illustrated catalog 400-B. How equipment operates and where it can be used is covered.

▲ For more details circle NED-1813 on enclosed inquiry slip ▲

Switch & Outlet Box Guide

General Electric Co., Construction Materials Dept.—Box catalog numbers, sizes and data on number and sizes of conductors permitted in each box can be found in switch and outlet box guide, available in form of 16 x 22-in. wall chart. It bears publication No. 18-81.

▲ For more details circle NED-1814 on enclosed inquiry slip ▲

Resistors & Controls

Clarostat Mfg. Co.—Technical data plus extensive listings of types and values of resistors and controls are given in catalog No. 51. Listed are standard distributor-stocked items, such as carbon and wire-wound controls, attachable shafts and switches, rotary switches, power resistors and power rheostats, among others.

▲ For more details circle NED-1815 on enclosed inquiry slip ▲

Scrap Salvage Aids

International Nickel Co.—"Rapid Identification (Spot Testing) of Some Metals and Alloys" is title of 48-page booklet. Procedures and materials required for identifying wide variety of metals are presented in detail.

▲ For more details circle NED-1816 on enclosed inquiry slip ▲

Emergency Power Plants

Universal Motor Co.—Specifications for emergency-standby light plants with capacities of from 700 to 36,000 watts, are presented in 4-page illustrated catalog BQE-1. Included are gasoline and diesel models and air or water cooled units for manual, electric, remote control and automatic standby starting.

▲ For more details circle NED-1817 on enclosed inquiry slip ▲

Air Tools & Accessories

Aro Equipment Corp.—Complete line of Aro industrial air tools and accessories is shown in 76-page illustrated catalog No. 60. Tools are grouped into sections, such as grinders, screwdrivers, drills, etc. Features, specifications and technical engineering data are included.

▲ For more details circle NED-1818 on enclosed inquiry slip ▲

Drawing Compounds

E. F. Houghton & Co.—Physical properties and applications of drawing compounds for all types of drawing operations are included in 4-page folder "Drawing Compounds by Houghton." Sections are devoted to general purpose, nonferrous, magnesium, aluminum and steel drawing. Various compound types are described.

▲ For more details circle NED-1819 on enclosed inquiry slip ▲

Small Production Presses

American Steel Foundries, Elmes Engineering Div.—Complete description and specifications of Hydrolair small, fast, power-operated production presses is found in illustrated bulletin No. 1036-A. Power is taken from shop air line.

▲ For more details circle NED-1820 on enclosed inquiry slip ▲

Fans & Blowers

Standard Electric Mfg. Co.—Wide range of ventilating fans, air circulators, belt driven exhaust fans, floor and window fans for office and industry, as well as spray booth fans, pressure and volume blowers for industrial application are listed in 24-page illustrated catalog "Fans, Blowers."

▲ For more details circle NED-1821 on enclosed inquiry slip ▲

Cylindrical Grinders

Landis Tool Co.—28-page illustrated general catalog CG-52 outlines features of line of precision cylindrical grinders. Line sketches are used to show typical operations that can be performed with each of 22 different types of machines. Descriptions and specifications are included for 175 various sizes listed.

▲ For more details circle NED-1822 on enclosed inquiry slip ▲

ENAMELSTRIP

STEEL · ALUMINUM · BRASS · PRE-FINISHED COLOR COIL

gives BRIGHT STAR BATTERIES the + of improved production − the costs of finishing

Bright Star's use of pre-colored metal coil assures a good finish before fabricating. Enamelstrip's exclusive process offers a flexible color coating which withstands the stresses of drawing, bending and forming without cracking or peeling. Costly, time-consuming finishing operations are entirely eliminated.

ENAMELSTRIP in continuous-feed coil coated and slit to specifications in any metal, any finish.

WRITE TODAY FOR DETAILED COLOR BULLETIN.

National Sales Representatives:

THE COATED COIL CORPORATION

507 West 30th St., New York 1 • Phone: LOngacre 5-3161

▲ For more details circle NED-1823 on enclosed inquiry slip ▲

Cost Less Because

THEY'RE SURESEAL PK COATED

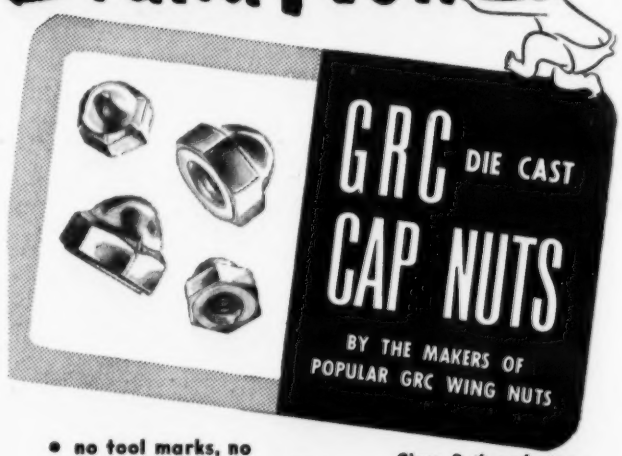
These tough-hided gloves will knock your costs for a loop on the rough jobs. Tops in chemicals, too. Man-sized, comfortable curved fingers. All standard styles. Ask your distributor, or write direct.

Dept. N.

THE SURETY RUBBER CO. 100 HALL AVE.
CARROLLTON, OHIO IN CANADA: Safety Supply Co., Toronto, Ont.

▲ For more details circle NED-1824 on enclosed inquiry slip ▲

Brand New!



• no tool marks, no cut-off burrs • high quality at low cost to meet every requirement • die cast, not turned! • non-ferrous, rust-proof zinc alloy • attractive, durable, dependable

Class 2 threads tapped square with face of nut. All commercial finishes in popular thread sizes. SUBSTANTIAL SAVINGS! Specials to order.

Write TODAY for bulletin, samples, prices.

GRIES REPRODUCER CORP.

82 Willow Ave., New York 54 • Phone: MOtt 5-7400

▲ For more details circle NED-1825 on enclosed inquiry slip ▲

SILLY... *isn't it!*

...to picture holding the lightweight and compact "Packet" between your fingers! But it does emphasize the portability of the "Packet" . . . very useful for "spot-lifting"; for production and assembly operations as well as maintenance work. Rugged, too, because of its all steel construction. And, the "Packet" is easy on the pull . . . because of an accurately cut series of heat treated alloy steel spur gears and pre-lubricated ball bearings. (They take the grunt, strain and backache—out of "lifting".) The "Packet" is priced at only $79.20 for 1-ton capacity . . . also available in ½ and 2 ton capacities. Call your nearest Harrington Distributor, or write for Bulletin P-5.

LIGHTWEIGHT
PORTABLE
COMPACT
VERSATILE

THE HARRINGTON COMPANY
1650 W. CALLOWHILL STREET
Philadelphia 30, Pennsylvania

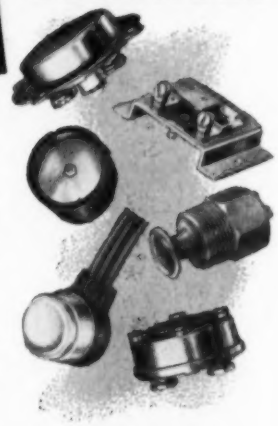
BEARCAT ELECTRIC HOISTS
TROLLEYS
"CUMALONG" LEVER PULLERS
PEERLESS HOISTS

MAKERS OF HOISTS SINCE 1876

For more details circle NED-1826 on enclosed inquiry slip

KLIXON *Thermo-Snap* CONTROLS

Can Provide a Solution to Your Temperature Control Problems



Klixon Thermo-Snap Controls . . . hermetically sealed and open types . . . are widely used in both military and commercial applications in such products as tanks, airplanes, sterilizers, radio and electronic equipment, electrical appliances, unit and space heaters, dairy heaters, etc.

Actuated by the simple snap-acting Spencer disc, they open the circuit with a quick, clean break . . . close the circuit to a solid make. Their accurate operation is best able to withstand shock, vibration, altitude or motion.

Klixon Thermo-Snap Controls are available in many types and ratings in a wide variety of operating temperature ranges. Our engineers will gladly help you with your temperature control problems. Write for their help and information, today.

KLIXON

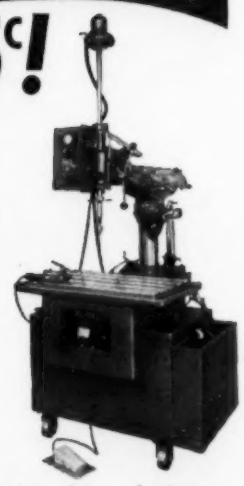
SPENCER THERMOSTAT
Division of Metals & Controls Corp.
1902 Forest St., Attleboro, Mass.

For more details circle NED-1827 on enclosed inquiry slip

You can salvage Valuable Parts-

—FOR LESS THAN 25¢!

Including Labor, Materials, Burden



Elox Electron Drills* are *production* machines designed for fast removal of broken taps, drills, studs, etc., without harm to thread or wall, sticking or welding. Most units are completely self-contained, easily transported and come ready to plug in. As simple to operate as any drill press, Elox Electron Drills* are an insurance against loss of time, money and materials. Throughout the world, Elox machines salvage millions of dollars of work each year. Check your scrap today. There's an Elox Electron Drill* priced for any industrial requirement. Write today.

ELOX CORPORATION OF MICHIGAN
740 N. Rochester Rd.
Clawson, Michigan

Western Division: Box 27 • Englewood, California

For more details circle NED-1828 on enclosed inquiry slip

New Literature & Catalogs

Capacitors & Filters

Astron Corp.—24-page illustrated catalog AC-3 offers performance data and test characteristics for line of capacitors and RF interference filters. Among items presented with specifications and features are Metalite metallized paper capacitors and type AQ capacitors for operation at 125° C without derating. Drawings, attenuation charts and design aids are included.

For more details circle NED-1829 on enclosed inquiry slip

Gasoline & Diesel Industrial Locomotives

Fate-Root-Heath Co., Plymouth Locomotive Works Div. —28-page illustrated catalog LG-52 includes photographs and specifications for line of 3 to 70-ton Plymouth industrial switching locomotives. Section is devoted to operation and advantages of hydraulic torque converter drive. Questionnaire insert aids in analyzing hauling needs.

For more details circle NED-1830 on enclosed inquiry slip

Process Pumps

Allis-Chalmers Mfg. Co.—Process pumps for handling corrosive and abrasive liquors, made in five sizes with capacity range from 20 to 1300 gpm at heads up to 260 ft, are described and illustrated in 6-page folder 08B6615B. Exploded view stresses accessibility of pump's few parts. Cross-sections of each of three stuffing box arrangements are shown.

For more details circle NED-1831 on enclosed inquiry slip

Motor Control Center

General Electric Co. — Capable of accommodating NEMA Size 1 through Size 5 starter units, GE CR7092 motor control center is designed for use in all industries where two or more alternating current motors up to 200 hp are controlled from a central location. Described and illustrated in detail in 24-page catalog GEA- 4979A, unit features interchangeable units based on even multiples of 14 in., 4-in. wiring trough and removable units with components mounted on lightweight frame.

For more details circle NED-1832 on enclosed inquiry slip

Controlled Temperature Equipment

Electric Hotpack Co.—112-page spiral-bound illustrated catalog on company's complete line of controlled temperature equipment presents detailed data and specifications on each type of unit. Included are sections on water baths, electric furnaces, heating mantles, ovens, gravity and mechanical convection, sterilizers, stills and other equipment.

For more details circle NED-1833 on enclosed inquiry slip

Packaged Steam Generators

Foster Wheeler Corp.—20-page illustrated and spiral-bound catalog on AG series packaged steam generators has sections devoted to plant-assembled generators, basic construction, range of capacities, control and instrumentation and partial list of purchasers. Line drawing and specifications of various types plus much general information are included.

For more details circle NED-1834 on enclosed inquiry slip

Diffusion Pumps

Distillation Products Industries — Characteristics of type MCF diffusion pumps are described and charted in DPI data sheet. Series of all-metal fractionating pumps is for evacuation of large electronic tubes, particle accelerators and other devices requiring ultimate pressure of less than 0.00001-mm mercury.

For more details circle NED-1835 on enclosed inquiry slip

Replacing Electric Cable

Rockbestos Products Corp.—Developed for buildings where electrical loads have outgrown their conduits, Rockbestos AVC cable permits greater current carrying capacity by one-third to one-half, and without increase in conduit size. Described in 12-page illustrated booklet "Rx for a Building with Hardening of the Arteries," cable allows use of same fittings. Booklet tells how to estimate rewiring savings and presents specifications of cable for circuits up to 600 v.

For more details circle NED-1836 on enclosed inquiry slip

Composition Variable Resistors

Chicago Telephone Supply Corp.—Technical data on military type composition variable resistors described in 6-page data sheet No. 155 includes wattage and voltage rating, humidity characteristic, leakage resistance, temperature coefficient, rotational life and voltage coefficient. Types 95, 90 and miniaturized 65 feature high stability for application in temperature range from −55 to 150° C.

For more details circle NED-1837 on enclosed inquiry slip

Selection of Vibration Pickups

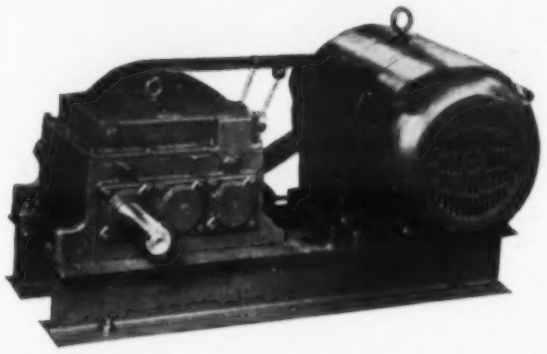
Consolidated Engineering Corp.—How to choose linear and torsional vibration and acceleration pickups is found in 8-page technical bulletin CEC 1503. Answers to application questions regarding amplitude and accelerations, nature of motion and range of temperatures also are included. Pickups described are used as primary sensing units in vibration and acceleration studies.

For more details circle NED-1838 on enclosed inquiry slip

TURNER

4-SPEED TRANSMISSION

from fractional HP through 50 HP



Here is the answer to many power transmission problems. A four speed transmission in sizes from fractional HP through 50 HP. For use with any speed electric motor or engine. Available in a wide range of speed ratios including certain six and nine speed transmissions.

SEND US A LETTER OR POST CARD OUTLINING THE DESIRED OUTPUT SPEEDS SIZE AND SPEED OF MOTOR OR ENGINE, A BRIEF DESCRIPTION OF YOUR PROBLEM AND WE WILL FORWARD COMPLETE DETAILS.

TURNER UNI-DRIVE CO.
3420 Terrace Street Kansas City 8, Mo.

For more details circle NED-1839 on enclosed inquiry slip

For PRODUCTION Assembly Fixtures—

locate and hold with "DE-STA-CO" TOGGLE CLAMPS

High holding pressures and precision construction of "De-Sta-Co" Toggle Clamps make this assembly fixture efficient. Locating pins welded to clamp bars *locate* channels for welding assemblies of varying lengths. Positive holding pressures, up to 4000 pounds in some models, hold parts in close contact essential for good production welding. *The same principles apply* to your drilling, machining, bonding, gluing or other production processes. Quick toggle action permits fast, safe loading and unloading of fixtures, uniform results, even by untrained workers.

Your nearby "De-Sta-Co" Distributor stocks more than 40 models for your convenience. Write for his name and your copy of new catalog issue.

DESTACO DETROIT STAMPING COMPANY
360 MIDLAND AVE. • DETROIT 3, MICH.

For more details circle NED-1840 on enclosed inquiry slip

PLANT MANAGERS!

Eliminate Rutted Floors

WITH A ½ INCH TOPPING OF

STONHARD RESURFACER

No Chopping Necessary

Concrete or wood floors can be made *safe!* STONHARD RESURFACER bonds securely and tapers to a feather-edge. It makes a resilient, warm, fire-resistant and vermin-proof floor that withstands heavy industrial traffic. The more you truck over it, the more compact it becomes. Mail the coupon *today* for full information.

STONHARD COMPANY
Building Maintenance Materials Since 1922
101 Stonhard Building, 1306 Spring Garden Street, Philadelphia 23, Pa.

Yes, I want details on STONHARD RESURFACER 101/2/52

Name .....
Company ..... Title .....
Address .....
City ..... Zone ..... State .....

For more details circle NED-1841 on enclosed inquiry slip

MAKING A *CLEAN SWEEP*

FEWER punctures — that's what this STEARNS Road Sweeping Magnet means to Kentucky motorists. On the job every day, this magnet picked up 25 lbs. of puncture producing material — the equivalent of 2500 possible punctures — on a recent six-mile run.

Magnets like these are only part of our extensive line of magnetic separators, pulleys, drums, suspended and lifting magnets that STEARNS Magnetic offers for protection, reclamation, purification, concentration and separation purposes.

Consult STEARNS—more than two generations of magnetic engineering experience at your disposal.

Foremost in the Magnetic Field

Stearns MAGNETIC INC.

653 South 28th St., Milwaukee 46, Wis.

▲ For more details circle **NED-1842** on enclosed inquiry slip ▲

TINS ALL METALS

Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it does not produce harmful fumes nor will it burn the skin. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packaged in 1½ lb. cans, price $3.00 f.o.b. *Advt.*

FARRELLOY CO.

1246 North 26th St. **Phila. 21, Pa.**

▲ For more details circle **NED-1843** on enclosed inquiry slip ▲

STOP GUESSWORK

Avoid Labor and Error of Counting by Hand

PIC Counters count anything. *FAST — ACCURATE — DEPENDABLE.* Stroke, Revolution, Electric, Automatic Batch Counters. Rugged, Heavy Duty Counters. Small low cost Counters. The right Counter for every job.

Tell us what you want to count or send for catalog. G1

MODERN COUNTING DEVICES
Stroke and Revolution Counters
Coil Winding Counters
Electric Counters
Automatic Batch Counters
Actuating Switches

PRODUCTION INSTRUMENT COMPANY
700-12 W. Jackson Blvd., Chicago 6, Ill.

Send literature on Counters:
☐ Heavy Duty Stroke ☐ Small Mechanical
☐ Heavy Duty Revolution ☐ Small Electric
☐ Heavy Duty Electric ☐ Batch Counters
☐ Complete 8-page PIC Counter Catalog.

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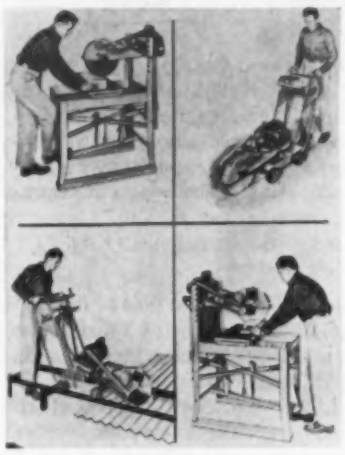
City_____ Zone____ State_____

▲ For more details circle **NED-1844** on enclosed inquiry slip ▲

MASONRY SAW
converts to concrete and track saw



Besides functioning as both a wet (dustless) and dry saw, model HD masonry saw can be converted to concrete and track saws. At any time, cutting head of the masonry saw can be placed on the convertible four-wheeled cart, adapting equipment for sawing concrete or asphalt patches or trenches in building floors, drives and walks. Saw can be switched from sawing glazed tile, concrete block and fire brick to sewer, water or gas lines and floor patches in few minutes. By placing cart on tracks, stone slabs, Transite sheets, large refractories, plywood and Masonite under elevated tracks can be sawed. Made by **Clipper Mfg. Co.,** Warwick at 28th St., Kansas City 8, Mo.

▲ For more details circle **NED-1845** on enclosed inquiry slip ▲

BONDING SOLUTION
prepares metals for final finish

Preparatory steps such as cleaning, rinsing and drying prior to final finishing of metals can be eliminated with cold spray application of Phospray bonding solution. Applied with ordinary spray equipment, solution dries immediately, leaving metal product ready for final finish. It can be used on all metal except aluminum, and can be cut as high three parts thinner to one part Phospray without reducing its effectiveness. Tested to government specifications, solution withstands conditions of humidity and salt spray while furnishing bond for paint coating. Product is available in 120-lb containers from **Du-Lite Chemical Corp.,** 1000 River Rd., Middletown, Conn.

▲ For more details circle **NED-1846** on enclosed inquiry slip ▲

EMERGENCY LIGHT
comes on when power fails

Automatic in operation, No. 16 emergency light offers illumination when regular power fails. It plugs into any 110-v ac outlet (direct current model is available). In event of power interruption, light comes on instantly with power supplied by standard 6 or 7½-v dry battery to which it is clamped. The 21-candlepower light is adjustable in any direction. Unit is self-contained and can be carried for rescue or emergency work. Available from **General Scientific Equipment Co.,** 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ For more details circle **NED-1847** on enclosed inquiry slip ▲

COVER PIPES TANKS, WALLS

NoDrip

Anyone can brush, trowel or spray NoDrip on any clean, dry surface. Goes on like plaster, forms a seamless, protective coating, *STOPS CONDENSATION DRIP.*

NoDrip keeps equipment and floors safe and dry; prevents corrosion of metal and prolongs its life. Acid, alkali and brine resistant. Comes in 1, 5 and 55 gal. drums, ready for use.

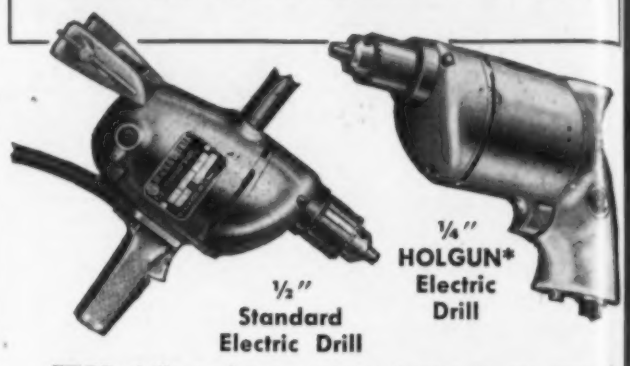
TRY NoDRIP—Apply NoDrip to a small area, compare the results with uncovered portions.

Send for NoDrip Handbook

J. W. MORTELL CO.
526 BURCH ST. KANKAKEE, ILL.

▲ For more details circle **NED-1848** on enclosed inquiry slip ▲

DRILLING PROBLEM?
Switch to BLACK & DECKER POWER



FOR drills to fit your needs, it pays to see your nearby Black & Decker Distributor *first!* You get an unmatched choice of Drill models—capacities from ¼" to 1¼"—choice of handle arrangement—choice of speed, power and price in most capacities. And you get powerful Black & Decker-built motors, full ball-bearing construction, extra-tough parts, husky housings, perfect balance. Write for free catalog to: The BLACK & DECKER Mfg. Co., 662 Pennsylvania Ave., Towson 4, Md. *Trade Mark Reg. U.S. Pat. Off.

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC **TOOLS**

▲ For more details circle **NED-1849** on enclosed inquiry slip ▲

IS YOUR OFFICE OR FACTORY SWITCH BOARD OVERLOADED?

HERE'S A QUICK AND ECONOMICAL SOLUTION

WHEELER

Self Powered ELECTRIC **TELEPHONES**

- Ideal for inter-office, office-to-factory, and interplant services when immediate call and privacy are essential.
- No batteries, no outside power source. No maintenance.
- Up to 12 stations. Bell, gong, horn or visual signals as required.
- No spark or fire hazard. Perfect emergency system.

Write for details and name of nearest distributor.

THE WHEELER INSULATED WIRE CO., Inc.
Division of the Sperry Corp.
1008 EAST AURORA ST., WATERBURY 20, CONN.

6WH52

▲ For more details circle **NED-1850** on enclosed inquiry slip ▲

STEAMFITTERS SPECIAL PACKING SAVES ME TIME & MONEY!

"My shelves were lined with dozens of sizes and types of mechanical packings until I found out about the 'one size packing', Steamfitters' Special Self-Forming Packing. Now, I've cut down on my packing inventory by 90%, and I use Steamfitters' Special Self-Forming Packing on such varied applications as reciprocating boiler feed pumps, centrifugal oil pumps, all my valves and many other applications. It will pay you to find out about Steamfitters' Special Self-Forming Packing."

Steamfitters' Special Self-Forming Packing is sold at leading plumbing supply and mill supply houses. Look for it in the attractive counter display carton packaged in half pound and two and one-half pound spools.

FLEXROCK COMPANY
3603 CUTHBERT STREET, PHILA. 4, PA.

Please have my supply house ship & bill me for _____½ lb. spools of Steamfitters' Special @ $3.50 each (slightly higher on West Coast.)
MY NAME_____
MY ADDRESS_____
MY SUPPLY HOUSE IS..
DIST. NAME_____
DIST. ADDRESS_____

▲ For more details circle **NED-1851** on enclosed inquiry slip ▲